



# ALBERTA



*Issued By  
The Authority of  
HON. DUNCAN MARSHALL  
Minister of Agriculture*

# ALBERTA



*A Survey of the topography, climate,  
resources, industries, transportation  
and communication, and institutional  
services of the Province of Alberta.*

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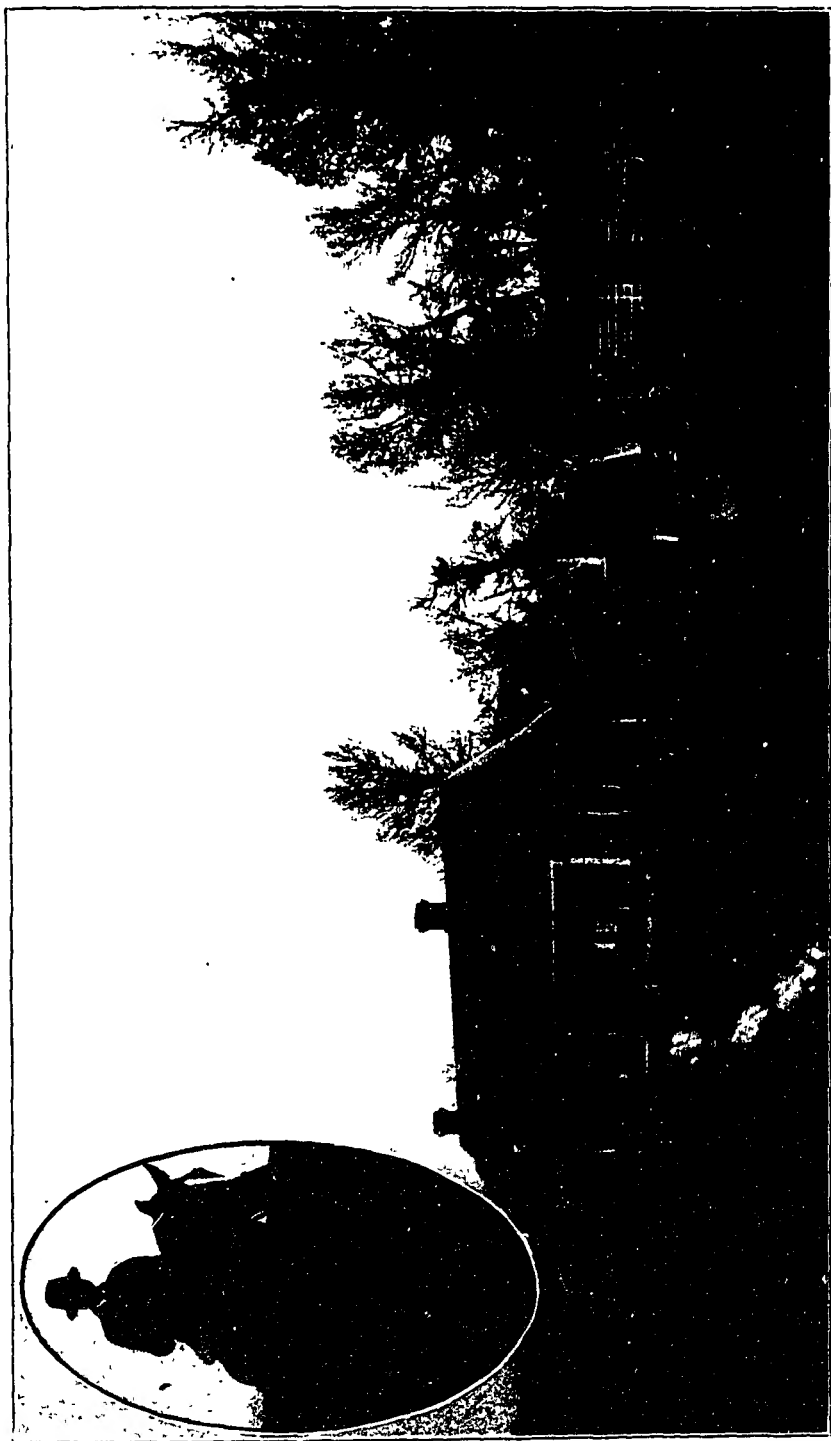
By J. McCaig, Publicity Commissioner

*Further Information  
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*Issued under the direction of*  
Hon. Duncan Marshall, Minister of Agriculture  
EDMONTON, ALBERTA





The EP Ranch and Royal Proprietor



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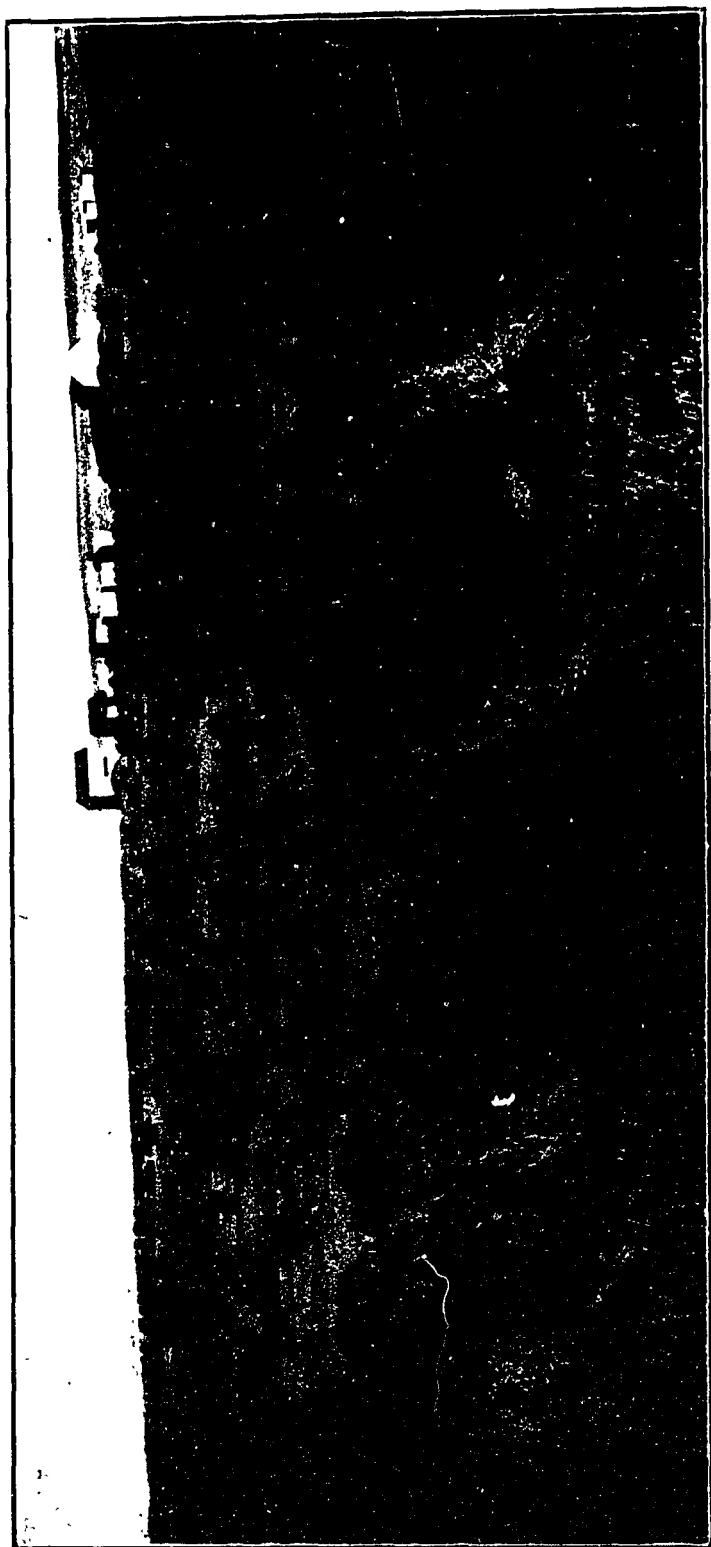
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Southern Alberta Wheat



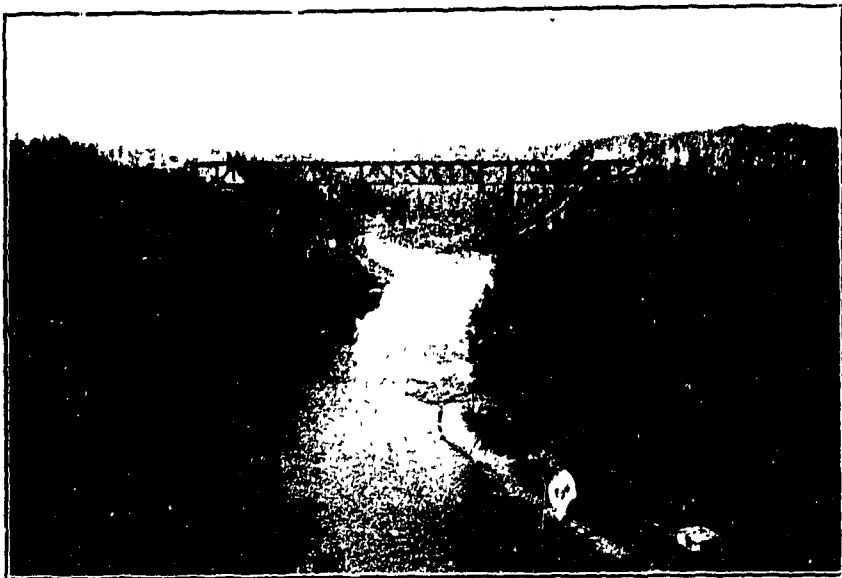
## THE EARLY HISTORY OF ALBERTA

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THE navigators of the Sixteenth Century, following Columbus, who set the way near the close of the century before, brought the knowledge and the interest of the New World into the experience of the people of the Old World. These were the Cabots, Cartier, Frobisher, Davis, and Gilbert. Following this the new goal of the navigators was the finding of a North-west passage to India and China. The first of these men was Hudson, who entered the great inland sea, which bears his name, in 1610.

The rewards of commerce were always associated with seafaring enterprises, and the new stirring of the imagination of the sea-dogs with vague and new geography called up dreams of new wealth beyond the Western seas. The navigators were cribbed up in Hudson's Bay, and the North-west Passage had to wait for the coming of Amundsen three hundred years later, who worked through in 1906. It is with the nearer task of claiming the land of Upper America that we are concerned, and with the way in which Alberta came into the family of the great sisterhood of provinces making up the Dominion of Canada. This in a historical sense was by the Hudson's Bay route.

**The Hudson's Bay Company.**—Charles II gave lively encouragement to the romantic commerce of his time, and his cousin Prince Rupert, with lighter responsibilities, entered personally into the framing of exploration and trading enterprises. For fifty years following Hudson's time there was small activity in Hudson's Bay, and little in the vast country to the West by which the old land and the new were being knit. Finally the court was stirred by the arrival home in 1665 of Sir George Carteret, the Royal Commissioner, from America, accompanied by Radisson and Grosseilliers with a wonderful story of American fur wealth. Prince Rupert was forward in organizing his friends for new doings. The association was called "The Gentlemen Adventurers of England Trading Into Hudson's Bay." After a successful voyage the association secured in 1670 a Royal Charter naming it "The Governor and Company of Adventurers of England Trading Into Hudson's Bay." This is the origin of the company now known more briefly as the Hudson's Bay Company. Prince Rupert was the first governor; Radisson was the spirit of the first enterprise. He was the first following Hudson to sail down the bay. While the new company was trading and building forts around the Hudson's Bay, the French were extending westward and northward into the prairie. After 1763, when Canada passed definitely into the hands of the English, another company of Anglo-Canadians, or really Scotchmen, undertook to trade into the Great Central Plain. This became the North-west Company. It united with the Hudson's Bay Company in 1821.



On the Canadian National west of Edmonton

**Selkirk.**—The next epoch in the life of the Great West was the inauguration of successful agricultural settlement. The first attempt at serious settlement in the new land was made by Lord Selkirk. He was a member of the Hudson's Bay Company. He had started one colonization scheme in Prince Edward Island and decided to change his activities to the interior of North America, where he finally purchased land from the company. He reached the Red River with his colonists in 1812. Here he purchased 116,000 square miles. The progress of the colony was rather slow. Its administration continued to be controlled by the company for the next fifty years. The charter of the company was renewed from time to time, but long before 1867 it was felt by the British Government that the progress of agricultural settlement and the need of agricultural settlement were together calling for an end of the type of rule represented in the administration of the fur companies.

**The British North America Act.**—In the year 1867 the British North America Act was passed. The clause of the Act of greatest interest to the development of the West was the one providing that it should be lawful to admit Rupert's Land and the North-West Territories into the Union. In preparation for the erection of the Province of Manitoba Hon. William McDougall moved during the first session of Parliament of the new Dominion of Canada to have a request sent to the British Government to hand over Rupert's Land and the North-west Territory to the Dominion. In negotiation with the Hudson's Bay Company the British Government secured the surrender of control of the land, the company retaining one-twentieth of the land south of the North Saskatchewan River. This explains the allotment to the company of about one and three-quarters sections of land in each

township. The company got three hundred thousand pounds in cash, retained its trading privileges and trading posts and also retained 45,000 acres around each post. The Riel Rebellion occurred between the settlement of terms and the passing of the Manitoba Act. The whole territory of Rupert's Land and the North-west Territory became part of the Dominion in June and the Manitoba Act became operative on July 15th of 1870.

The political organization of the West proceeded rather rapidly from this time. British Columbia became a province of the Dominion in 1871 and the country between Manitoba and British Columbia, now making up the Provinces of Saskatchewan and Alberta, won step by step the privileges of self-regulation and at the same time assumed the duties and obligations pertaining to the work of administration according to the forms and spirit of free British states. At first the open territory west of Manitoba was administered by a council presided over by the Lieutenant-Governor of Manitoba. The empowering legislation for this government was passed in 1871. In 1875 the Constitutional Act of the North-west Territories was passed and legislative power given to these territories under the Lieutenant-Governor of Manitoba and provision made for elected representatives to the North-west Council. The first session was held at Swan River in 1887. In 1883 Regina became the capital of the North-west Territories. In 1887 the Territories were divided for federal purposes into four electoral districts—East and West Assiniboia, Saskatchewan and Alberta. In 1888 an Act of the Dominion Parliament was passed abolishing the old council and providing in its stead a Legislative Assembly of twenty-five members from the four federal districts already created. The chief interest connected with the work of this government was the struggle for increased powers.

**The Alberta Act.**—In September, 1905, Acts were passed creating the territory already organized into two provinces, Saskatchewan and Alberta. The Dominion Government retained control of all public lands, timber, fish, water powers, mines and minerals, but otherwise the duties and powers corresponded with those set out in the British North America Act as pertaining to the other provinces. It is under one of these Acts that we are now governing and being governed.



**CRAIGIE MASTERPIECE**—Clydesdale stallion imported by the Department of  
Agriculture for the improvement of Alberta horse stock.

## AREA AND SURFACE

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**Surface.**—A map of Western Canada makes Alberta simply look like one of the three provinces into which the prairie country of Canada has been divided by conventional lines, but there are differences in character between this most westerly of the Prairie Provinces and the other two. These differences relate to elevation, surface character, climate, resources, and industries. Manitoba begins with an elevation of about 800 feet, Saskatchewan reaches an average of 1,600 feet, while the average in Alberta is still higher, and the province reaches to the crest of the Rockies in the southern half of the western side. The surface is more diversified than the surface of the lower prairie levels and the climate is somewhat different from proximity to the neighbouring Coast Province of British Columbia. The resources are likewise diversified and consequently the industries are varied and interesting.

**Area.**—Alberta is a large province. Its length from north to south is seven hundred and fifty miles and its width varies from two hundred to four hundred and fifty miles. Its total area is 255,585 square miles. It is larger than Germany, France or Austria-Hungary and is within a few hundred square miles of being as large as the combined areas of Montana, North Dakota and Minnesota and is over twice the area of Great Britain and Ireland together. Expressed in acres its area is 158,878,600. Of this 1,510,400 is the area covered by lakes and rivers, leaving 157,368,260 acres of land. Putting the rough land of the eastern slope of the Rockies and other waste areas, and including also land that will require draining or other reclamation to bring it into use, at 76,068,260 acres, leaves 81,300,000 acres of land that can be easily converted to profitable agriculture. An area of what would come under agricultural land approximating 42,000,000 acres, or about half the ploughed land of the province, has been alienated as homesteads, pre-emptions, railway, Hudson's Bay, irrigation and school endowment lands. Of the other half about 15,000,000, including soldier settlement lands, is at present available for entry, chiefly in the central and northern parts of the province.

A glance at the map will show by transportation lines and the establishment of towns and cities that the province is already developing actively northward and it is in a north and south direction that the country can be studied as to differences in industrial areas and adaptabilities. It is customary to speak of the main areas of the province as Southern, Central and Northern Alberta, and though any division must be more or less arbitrary there are characteristic differences which make this division a convenience in discussing such matters as climate, resources and industries.

**Three Provinces in One.**—Southern Alberta is generally understood to be the country extending from the International Boundary as far north as the Red Deer River, which is one hundred miles north of Calgary. This country—the old ranchers' paradise—is to a large extent open prairie except for the part leaning on the great Rocky Mountain ridge for a distance of sixty miles into the Province on the west side, where the country is of mountainous or foothill character. The characteristic vegetation is the short prairie grass which has been such an important resource to the stockman. The general aspect of the country, especially in the eastern half, is that of the open level prairie, but there is a good deal of timber in the foothills, and the river bottom lands are lightly treed with cottonwood. Rivers run at a depth of two or three hundred feet below the level of the bench land and running from the rivers are numerous coulees. There are a few lakes in the south country but generally they are small, shallow basins, except in the mountains, and the volume of water depends directly on local precipitation.

Central Alberta extends from the Red Deer to the height of land between the Athabasca and Peace Rivers. Edmonton may be considered the centre of this division. The striking surface difference between this part of the Province in its natural state and the southern part is its higher and heavier vegetation. The grass is longer and coarser, scrub is common and there are alternating open and treed areas through the whole of the western half of this district. The scrub consists of small willows, briars, etc., and the larger growth of grey willow, poplar bluffs and areas of spruce in the river valleys, of size and frequency to be valuable for local building and to some extent for commerce. The small vegetation consists of a rich variety of prairie and heavier grasses and leguminous plants. The land in this district is of black quality from the decomposition of liberal surface growth. The precipitation is slightly heavier than it is in the southern division.

The upper third of the province is not yet generally developed but the Peace River which runs through it has already a number of prosperous settlements tributary to it. Railways are penetrating the country north, north-east and north-west from Edmonton and settlers are making homes along these lines. This district has more timber than either of the others on their prairie levels, and generally resembles Central more than it does Southern Alberta. There are areas of valuable timber in Northern Alberta, particularly along the river valleys. Parts of it, however, resemble Central Alberta in having the park-like appearance due to alternating open and treed stretches. In both Central and Northern Alberta the snows lie more steadily in winter than they do in the southern part of the province. The northern section is rather more diversified by hills than the rest of the prairie area of the province is.

Besides the rather obvious and important differences in the topography, climate and natural vegetation of the province in a survey from north to south there is necessarily a good deal of difference between the eastern and western sides. The southern half of the western side of the province is mountain and foothill country

while in the upper half of the province the boundary line and the line of the crest of the mountains diverge. This area is marked with brush and bluffs alternating with attractive open stretches. The close settled middle parts of the province and most of the north are of this character and the soil is darker from heavy vegetable decomposition. Towards the east, on the other hand, in the whole of the lower half of the province, the country is more open, varying in vegetation between land that carries a heavy grass with patches of light scrub to open level prairie with the bunch grass of low habit as its characteristic vegetation. The eastern side becomes more and more like the prairie stretches of the Great Central Plain.

**Drainage.**—There are three large continental drainage systems represented in Alberta. The Peace and the Athabasca Rivers, which belong to the great Mackenzie system, drain the northern half of the province. A number of important lakes, such as the Lesser Slave and Athabasca, form a part of this system. The northern part of the province generally is quite well watered. Both the Peace and Athabasca Rivers have numerous tributary streams and there are a good many lakes scattered over the whole of this area. Both the Athabasca and Peace Rivers are navigable, the Peace for the whole distance between Fort St. John in British Columbia and past Fort Vermilion, a distance of 600 miles, and the Athabasca from Jasper with a portage near Fort McMurray right to Lake Athabasca.

The Saskatchewan River system, made up of the north and south branches and such important tributaries as the Battle, Red Deer, the Bow and Belly Rivers, drains all the rest of the province except a small portion in the south. The general slope of the Saskatchewan system is easterly or north-easterly. The Saskatchewan is part of the Nelson River system which flows into Hudson's Bay from Lake Winnipeg. Both branches of the Saskatchewan are navigable, but the current is rather rapid, and navigation on these rivers is not developed to a great extent. All the important rivers of Alberta flow at a considerable depth below the prairie, particularly on the western side of the province. They offer great possibilities for the development of water power, but this has not yet been made use of.

In the southern part of the province the Milk River, which is connected with the Mississippi system, enters the province and flows through Canadian territory for a distance of about sixty miles not far from the International Boundary.



The Better Farm Homes



## CLIMATE AND WEATHER

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**Climate.**—The climate of Alberta is of very attractive quality and this quality has a very important bearing on the possibilities of development northward and on industrial and more particularly agricultural activities. The climate of the interior provinces of Canada is described as extreme. The winters are subject to low dips of temperature and the summers are quite hot. Alberta, however, by reason of contiguity to the coast province has a rather moderate climate. The winters are relieved by periodical relaxation of cold, and the summers, while rather dry and warm in the harvest season, are always cool at nights. This results in crisp vegetation and a period of satisfactory rest and repair for people. The precipitation of the province is between fifteen and twenty inches. It is rather heavier in Central Alberta than it is in either Northern or Southern Alberta, though the difference in precipitation in these different sections is not very great.

An outstanding feature of the climate is the Chinook wind, which reaches its strongest development in Southern Alberta. This is a dry, warm wind from the west or south-west. It is dry because its moisture is condensed in its ascent to mountain heights on the west side of the Rockies, and it is warm, partly because of the latent heat gained during the condensation of moisture on the west side of the mountains, but chiefly on account of pressure and friction from the upper body of air as the western current descends to the prairies on the inner or eastern slope of the Rockies.

The effects of the Chinook are rather startling, particularly in winter time. The country may be covered with rather heavy snow and the temperature be standing steadily below zero for days when a Chinook comes and raises the temperature almost to spring warmth and causes the snow to disappear in a few hours and leave the prairie dry. This may occur half a dozen times in the winter season. The occurrence of these spells of relaxation of cold is what made the southern country attractive to ranchers back in the seventies and still makes the winter easy to get through. In summer time a dry wind may reduce the vigour of growing crops by hastening transpiration, but, on the other hand, the sharp, dry weather of the harvest develops the gluten instead of starch in the wheat and makes a crop of hard instead of soft grain. While the winds contribute to both personal and animal comfort they prevent some of the moisture represented in snow and rain from becoming effective by carrying it away. The Chinook is responsible for the introduction of the practice of irrigation in the south and of the special system of cultivation known as dry farming where irrigation water is not available.

While the Chinook is strongest in the south the same influence or the same kind of influence from warm westerly winds gives a climatic quality to the whole of the province, particularly on the western side, and it is these moderating relaxations which have opened up for Alberta such possibilities for northern development.

**Maximum and Minimum Temperatures for Meteorological Stations  
in Alberta, 1918.**

|                |      | January | February | March | April | May | June | July | August | September | October | November | December |
|----------------|------|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|
| Medicine Hat   | Max. | 48      | 46       | 68    | 80    | 86  | 98   | 98   | 96     | 87        | 80      | 61       | 58       |
|                | Min. | -42     | -14      | -9    | 13    | 21  | 35   | 42   | 35     | 28        | 13      | 14       | -18      |
| Lethbridge     | Max. | 60      | 54       | 68    | 77    | 80  | 90   | 94   | 93     | 83        | 78      | 59       | 53       |
|                | Min. | -31     | -41      | -10   | 6     | 21  | 29   | 35   | 33     | 28        | 11      | 2        | -11      |
| Macleod        | Max. | 57      | 54       | 69    | 65    | 70  | 91   | 99   | 95     | 86        | 74      | 58       | 51       |
|                | Min. | -32     | -41      | -10   | 13    | 20  | 30   | 36   | 39     | 31        | 17      | 1        | -4       |
| Bassano        | Max. | 54      | 50       | 66    | 76    | 81  | 92   | 97   | 96     | 83        | 72      | 50       | 40       |
|                | Min. | -32     | -28      | -14   | 5     |     | 26   | 33   | 37     | 25        | 5       | -4       | -13      |
| Calgary        | Max. | 54      | 55       | 66    | 76    | 78  | 90   | 94   | 93     | 84        | 74      | 69       | 52       |
|                | Min. | -24     | -28      | -20   | 20    | 23  | 31   | 32   | 34     | 30        | 16      | 7        | -4       |
| Red Deer       | Max. | 46      | 51       | 64    | 70    | 78  | 86   | 91   | 89     | 79        | 74      | 66       | 47       |
|                | Min. | -45     | -43      | -32   | 4     | 20  | 33   | 35   | 34     | 28        | 10      | 2        | -8       |
| Halkirk        | Max. | 44      | 45       | 60    | 73    | 78  | 90   | 94   | 92     | 78        | 69      | 53       | 45       |
|                | Min. | -36     | -38      | -26   | -2    | 17  | 28   | 28   | 29     | 34        | 4       | 4        | -9       |
| Vermilion      | Max. | 40      | 42       | 61    | 75    | 75  | 80   |      | 93     |           |         | 55       |          |
|                | Min. | -50     | -48      | -25   | 8     | 20  | 32   |      | 28     |           |         | 7        |          |
| Edmonton       | Max. | 44      | 53       | 62    | 71    | 76  | 83   | 90   | 83     | 82        | 69      | 56       | 45       |
|                | Min. | -43     | -33      | -28   | 2     | 21  | 31   | 29   | 36     | 27        | 7       | -3       | 0        |
| Athabasca      | Max. | 42      | 49       | 58    | 69    | 75  | 82   | 89   | 81     | 82        | 71      | 59       | 42       |
|                | Min. | -52     | -47      | -40   | 10    | 16  | 19   | 25   | 36     | 24        | -1      | -13      | -10      |
| Grande Prairie | Max. | 44      | 43       | 48    | 65    | 76  | 78   |      |        | 82        |         | 54       | 43       |
|                | Min. | -36     | -34      | -27   | 3     | 22  | 30   |      |        | 28        |         | -1       | -17      |

**Precipitation.**—An idea of the precipitation for the province may be obtained from a survey of the Dominion Meteorological Service records. The service has grouped together points of observation that lie within the drainage area of important and characteristic rivers by which such divisions are natural rather than arbitrary. There is a separate group for mountain points such as the parks. The figures given in each year for a district are obtained by taking the average over the whole number of records taken at points in such district in the year. In all of the districts gaps occur, and in districts like Peace River, observation stations have not been long established and gaps are more common. Winter records are

rather frequently lacking. The figures must be understood to mean that the districts would normally have received not less than what is recorded, or rather that they all received more, especially the Peace River District. It should be understood that figures are not to be taken to give the precipitation at individual points, as there are wide variations between points within the districts themselves.

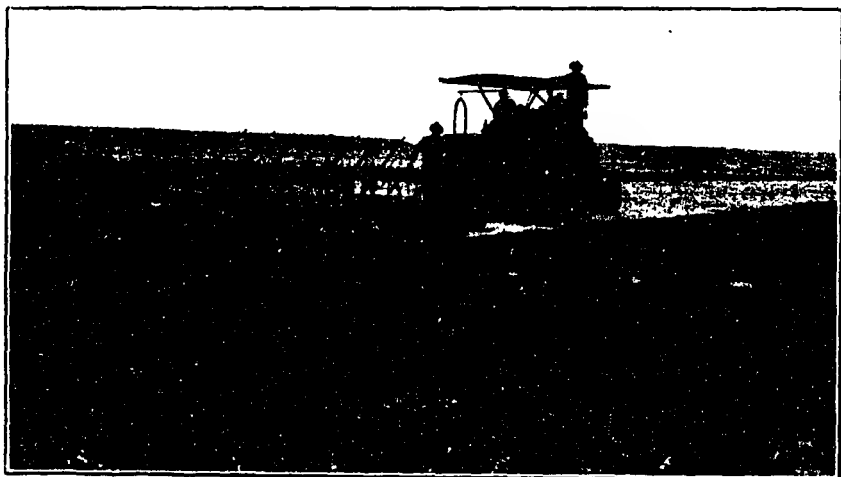
| DISTRICTS                               | 1909  | 1910  | 1911  | 1912  | 1913  | 1914  | 1915  | 1916  | 1917  | 1918  | 10 yr<br>avg. |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------|
| North Sask. River Dist. . . .           | 12 15 | 15 26 | 22.48 | 15 51 | 11 26 | 12 60 | 14.84 | 20 24 | 11 69 | 12.20 | 14.83         |
| Red Deer River Dist. . . .              | 13 75 | 13 39 | 19.87 | 17.02 | 10 88 | 15 66 | 18 84 | 21.48 | 13 42 | 9 36  | 15.37         |
| Bow River Dist. . . . .                 | 13 96 | 8.80  | 18 63 | 12 13 | 13 24 | 13 13 | 19 07 | 19 42 | 11 43 | 10 12 | 13 99         |
| Rocky Mountains Dist. .                 | 21 56 | 16 32 | 20.76 | 12 82 | 15 87 | 18 83 | 24 41 | 21.76 | 17 10 | 12.57 | 18.20         |
| Athabasca River Dist. . .               | 5.15  | 12.58 | 18 43 | 14 72 | 15 02 | 14 37 | 11 82 | 12 92 | 10 38 | 10 56 | 12.59         |
| Peace River Dist. . . . .<br>Incomplete | 8.98  | 6.71  | 14 01 | 6 43  | 14 84 | 7 94  | 11 61 | 9 71  | 7.52  | 10 04 | 9 78          |

**The Seasons.**—The aspect of climate which is interesting to the settler or resident is the day-to-day climate, or what we call weather. The seasons of Alberta are rather distinctive and new for those coming from the South, from Eastern or Central Canada or from the Pacific Coast.

In all parts of the temperate zone the season which is commonly found most trying on account of the care that is necessary for personal comfort is the winter season. Alberta has not the steady equable qualities of an insular climate in winter. The winter temperatures are sometimes low. Dips below forty occur but the steady wearing cold of the interior stretches of the continent in its upper latitudes is not a feature of Alberta climate. The winters are usually agreeable. In the south the Chinooks, which have already been spoken of, occur frequently and people have several times through the winter a satisfying relaxation and re-action such as comes every place with the arrival of spring. The weatherman frequently throws a section of summer into the dead of winter. Occasionally the snow lies for a period of some weeks but not generally. Traffic is on wheels throughout the year and outdoor occupations and sports keep going into or through winter in Southern Alberta. The visits of the Chinook bring strong winds which at times are uncomfortable but not destructive. Hurricanes and cyclones are not known.

In Central and Northern Alberta the snows lie rather steadily and of sufficient depth for good sleighing. The snow is usually light and rather dry, but blizzards do not occur. The lowest temperatures of course are in the extreme north of the province, but even with the rather low dips of temperature that may occur in any part of the province the discomforts arising from a moist, heavy climate are not felt. The air is clear, and sunny days are about as characteristic of winter as they are of summer. The snow

of winter usually disappears earlier in Alberta than in the central provinces of Canada, but the period of seeding does not immediately arrive. This does not apply to the south in which seeding operations are generally quite early and farmers are frequently working in the fields in March in order to secure quick seeding and early germination of crops from the supply of winter moisture. In Central and Northern Alberta most of the seeding is done in the month of May, though the preparation begins earlier than this. The growing season is not long. When native vegetation starts it comes into full leaf very rapidly and the same is true with crops. The warmth and rains together conspire to produce a very heavy growth in a very short time. People breaking new land usually break in the month of June on account of the favourable condition for plowing by reason of rains, and it is likewise desirable to break land before the grass or other vegetation has used up too large a part of the supply of moisture in the soil. Usually right after regular seeding is done the farmers will be found breaking their new land.



**Sod Busting**

People sometimes think that high latitudes are necessarily unfavourable to the maturing of crops, but this is not the case. The compensating length of daylight and sunshine in the upper latitudes makes for the quick maturing of all kinds of farm and garden crops. In the longest summer days it is still twilight at ten o'clock and dawn breaks at three in the morning. The air during the growing period is wholesome and agreeable on account of the warmth and freshness belonging to the season of rapid growth. The prairie is dressed with a carpet of minute flowers. The brush country is scented with the wild rose and blossom of the Saskatoon and wild cherry. The bluffs of poplar standing in circular groups on the elevations are fringed and protected with rings of gray willow and mixed shrubbery. The grasses and wild herbs on the heavier lands

spring to a height sometimes of two or three feet. The pea-vine and vetch in countless varieties run their rapid cycle in both meadows and wood lot.

The summer season is rather brief. Following the period of plenteous moisture of spring we have a rather dry, sharp, ripening period for crops of the field. It is this quality of climate which is conducive to the production of a good class of cereals, especially wheat. The summer dryness is more characteristic of the south



**Threshing in the Open**

where wheat is the main crop, and the character of the days is favourable to the production of a hard glutinous rather than soft wheat. Farther north where the lands are slightly blacker and the precipitation a little heavier the oat crop holds sway. and the harvest season belongs to August rather than July, as it does in the south. Harvest is a longer season in the centre and north. Much oat seeding is for fodder and when the grain harvest is over the binders continue to work on the green feed, as it is called. Crops generally keep green longer on new land than on tamed land. During even the hottest part of the summer season the nights are always pleasant and there is no condition of oppression or discomfort arising from midsummer heat during the hours of rest. This is due to the rapid radiation of heat from the ground as the sun lowers. The warmth is not cloaked or held by overhanging vapour. This condition is important in relation to grain-growing as it prevents the development of rust.

The fall season is regarded by many as the most pleasant season of the year. The September and October days are usually bright, the air is crisp and cool, and conditions are favourable to enjoyable outdoor life either in industry or recreation. The roads are always good in autumn and free from mud. Sometimes the autumns are rather too dry and are not always favourable to active cultivation and preparation of land for the succeeding season. The autumn is the season for the sportsman and athlete on account of the opportunities for hunting and on account of the favourable weather conditions for play. All the operations of harvesting are completed in the open. Both the gathering of the grain and the threshing are usually carried on together and only the grain is housed while the straw is blown into huge loose conical stacks which afford good supplies of rough supplementary fodder for horses and cattle.



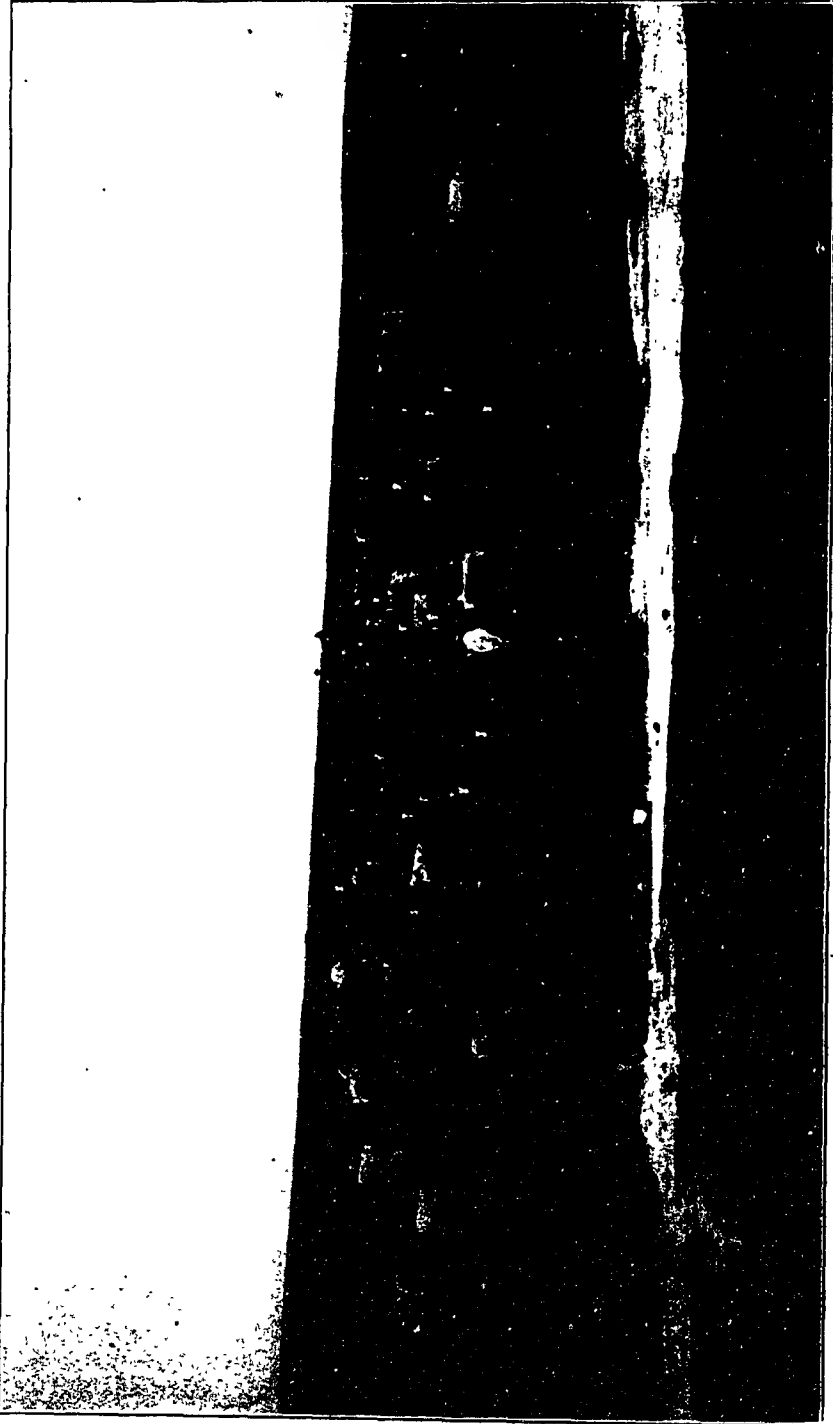
## AGRICULTURAL RESOURCES

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**Evolution of Land Enterprises.**—The diversified surface, the variation from both winter and summer extremes in climate, the mixed resources and opportunities for different occupations in Alberta dispel the idea that prairie existence is to any degree flat or monotonous. The land resources are a revelation to the new-comer especially in relation to the great number of different kinds of work that may be undertaken throughout the whole scale of farm land enterprises, such as open pastoral work, small proprietary ranching, broad grain farming, mixed farming, special dairy farming, special pure-bred stock-raising and irrigation farming. The agricultural development of the province started so recently and is still going on so actively, even in its most pioneer aspects, that an account of its present attainment may appropriately include brief reference to its beginnings.

**Pastoral Farming.**—The development of the country has generally been from south to north. While the Hudson's Bay Company had outposts in the north for fur trading purposes as far back as 1778 and 1795 at such places as Fort Chipewyan and Fort Edmonton, the active beginnings in the use of land which connect themselves with our present conditions were in Southern Alberta. Early in the seventies a number of stockmen from the other side of the line were attracted to the district of Southern Alberta by its nutritive grasses and fine climate. This was the beginning of the ranch industry which ran an undisturbed course for thirty years, that is, until 1900, and extended into the south-western portion of the present Province of Saskatchewan and north to the Red Deer River. While the first ranchers were Americans, most of the stockmen at a later time were Old Country men and Canadians. These were men of some experience and were accustomed to good stock. Good herds of cattle and horses were established in the Lethbridge, Macleod, Pincher Creek, High River, Calgary, Bow River and Red Deer districts. Early in the eighties sheep were also introduced though the sheep interests did not grow into great volume rapidly.

The system followed with live stock in Southern Alberta was one of outdoor feeding throughout the year. This was possible by reason of the nature of the grasses and character of the climate. The low vegetation of the prairies consisted principally of buffalo grass, bunch grass and blue joint which reached maturity early in the summer. The quality of climate which now gives us the good wheat, in the old days gave the cattleman his winter feed cured on the stem by the harvest Chinook. This forage practically remains oily and valuable until cut or eaten.



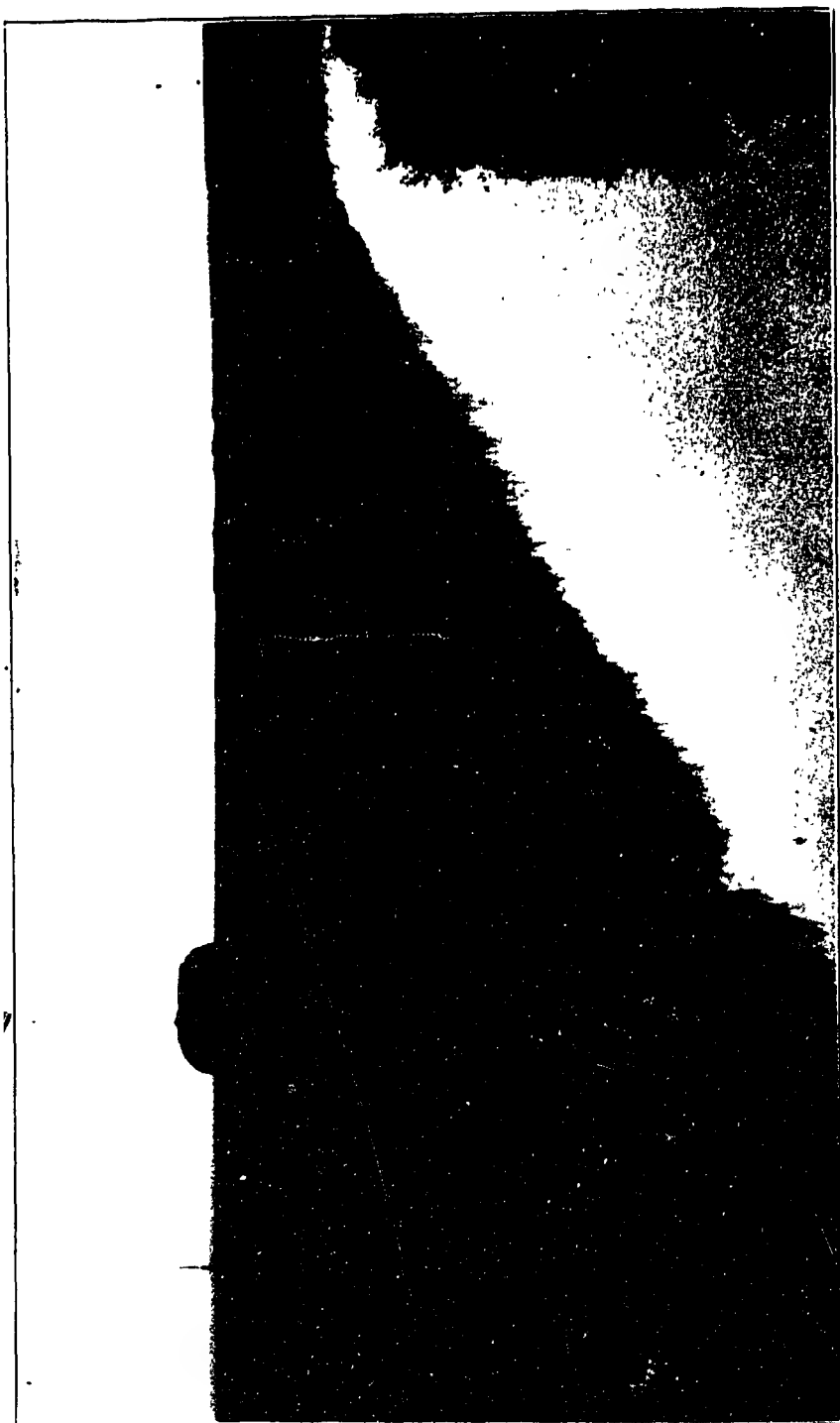
Type and Quality of Range Beef



The Chinook likewise made it possible for cattle, horses and sheep to graze outside throughout the year. At that time the grasses were abundant and the tax on pasture slight. The coulees and brushy river bottoms furnished natural shelter and long feed when the bench lands were deeply covered with snow. The system of all-the-year-round grazing was necessarily attended with some losses, but as the rancher had no capital investment in land on which dividends had to be paid and had very little equipment, he could stand some reduction of his productive stock by losses. This system became gradually modified by competition for range, and stockmen had to put up hay to carry their stock over short periods of hard weather and so reduce their percentage of losses. Those who are unacquainted with this system of work find it hard to understand how good stock can be produced by this system. The natural grass of the province, however, seems to be a complete and nutritious ration which develops large frames in stock and likewise covers these frames well with flesh. Some of the most beautiful beef animals produced in the Dominion have been grown on the Southern Alberta range.

**Irrigation.**—The pure pastoral stage of Alberta agriculture took its rise and ran its course in the thirty years between 1870 and the end of the century. About the year 1900 the stock yards at such places as Calgary, High River, Claresholm, Pincher Creek, Macleod, Lethbridge, Medicine Hat, Bassano and Langdon received their best drives of beautifully finished long threes and of fours for the British market, and by this time there were established a goodly number of prosperous ranchers and rancher companies in desirable locations throughout the Southern Alberta country. In the year 1902 the Alberta Railway & Irrigation Company with headquarters at Lethbridge received its charter and made its purchase of land from the Dominion Government and instituted its enterprise for the watering of lands along its course between Spring Coulee and Chin Coulee in the districts of Magrath, Raymond, Stirling, Lethbridge, Coaldale and Chin, but chiefly east of Lethbridge. At the same time the dry farm invasion started and homesteads on unwatered land were taken up throughout the whole of this southern district. Barbed wire fences were erected throughout Southern Alberta. In the year 1903 the Canadian Pacific Irrigation Company was inaugurated with the aim of watering lands along its main line east of Calgary from supplies drawn from the Bow River. About the year 1907 the Southern Alberta Land Company with headquarters at Medicine Hat was inaugurated for the purpose of watering land west of Medicine Hat.

The area of land owned by the irrigation companies of Southern Alberta makes up a total of nearly three million acres of which thirty per cent. is actually irrigable land. There are four main tracts or sections included in the large enterprises. The Canadian Pacific Railway Company's western section lies east of Calgary and north of the Bow River. It is about forty miles from north to south and runs sixty-five miles east. In this area water is applied to 678,000 acres, of which there are actually irrigable 223,000 acres.



Practically all of the irrigable land in this section has been sold. Lying south-east and adjoining this is the eastern section of the Canadian Pacific Railway Company's Irrigation block. There are about 1,245,000 acres in this tract of which 400,000 acres are actually irrigable. There are still about 30,000 acres of this land unsold. In addition to this the Canadian Pacific Railway Company acquired in the year 1908 the interests of the Alberta Land & Irrigation Company originally known as the Alberta Railway and Irrigation Company at Lethbridge. This tract included 499,000 acres of which about 120,000 acres are irrigable, and this irrigable land has practically all been sold. There is available for purchase in these areas still some dry land.

Another large area which has been converted to irrigation is the property in the Suffield district of the Canada Land & Irrigation Company, formerly called the Southern Alberta Land Company, with headquarters in Medicine Hat, and another area about thirty miles west of Medicine Hat in what is called the Bow Island district. The total area of this tract is approximately 530,000 acres of which 203,000 are irrigable. These lands have been made available for purchase only since the beginning of 1919 and only 29,000 acres have yet been sold.

There is promise of renewed development in irrigation services in Southern Alberta due to the occasional reduction of yields by irregularly distributed moisture in the great grain area of Southern Alberta. The Taber Irrigation Association, established in 1919, takes account of the watering of 17,000 acres near Taber on the storage waters of the Lethbridge irrigation scheme. A number of other schemes are under way to which the Dominion and Provincial Governments are giving joint encouragement.

The benefits of irrigation have been well demonstrated in Southern Alberta. Besides making it possible to grow heavier and better crops than are grown on unirrigated land the supply of moisture makes it possible to grow a greater variety of crops. On dry land grain is the characteristic crop. Under irrigation heavy crops of forage, especially alfalfa, and roots are grown which make profitable stock raising and stock feeding possible. The water insures heavy crops of all kinds and the feeding of live stock ensures large returns per acre from land, conserves fertility and makes home building on western lands permanent.

A few big stockmen still remain in the south country, chiefly in the foothills, on proprietary ranches tributary to such places as Olds, Crossfield, High River, Nanton, Claresholm, Macleod, Cardston, Magrath, Raymond, Coutts and north and south of Medicine Hat, but generally speaking the introduction of the wire fence has made it impossible to run large stock on open range in Southern Alberta. Cattle stock on free range during a period of storm can generally drift to shelter, but if they are stopped by wire fences a good many of them perish. Sheep, on the other hand, have to be herded anyway, and there are at present about three hundred thousand sheep being run on open areas in various parts of Southern Alberta extending from the forest reserves to Medicine Hat and to a lesser extent at

points along the main line of the Canadian Pacific Railway. Sheep promise to become an important factor in Southern Alberta agriculture. Big stock cannot be kept to any advantage on the grain farms chiefly on account of the scarcity of summer pasture. Sheep on the other hand can get along on short summer pasture, they can clean the summer-fallows, pack them, and fertilize them, and grow fat on stubbles and springing weeds in the fall. They are very easily wintered and give quick returns. They seem about to furnish the much needed live stock element to grain-growing enterprises.

The nature of the change in the south briefly consists of the general elimination of the free ranger and the substitution of the alfalfa kings and dry farmers. The area actually subject to watering is not large compared with the whole of the area of Southern Alberta so that the characteristic change may be said to be the substitution of grain farming for pastoral farming in Southern Alberta. It is not generally possible to run much cattle stock inside of the fences of the dry farm and the farmer's large stock is limited chiefly to a small number of milk cows and of horse stock for power purposes and likewise with a tendency to reduce his horse stock by the substitution of power machinery for cultivation. While the stock business and dry farming systems do not take kindly to each other the irrigationist on the other hand produces large quantities of the best feed in the world, consisting of alfalfa and other mixed fodders and of heavy crops of feed grains such as oats and barley, a limited amount of wheat and large crops of roots. The introduction of alfalfa growing makes possible the establishing of dairy enterprises and of sheep, lamb and cattle feeding, though this has not yet reached its best possible development in Southern Alberta. Feeding enterprises supported on the heavy forage and roots of the irrigated farms stand for a new type of pastoralism following the closing up of the range.

While the irrigationists and dry farmers have put an end to the open range business it is the case that more stock is raised in Southern Alberta than was raised under range conditions. The cow stock of the ranch country in the old days was extremely sparse. Many times as much in value has been produced under cultivation as was produced above the old prairie sod when we consider the products of the dry farms and irrigation farms together. The opportunities offered for the settler in Southern Alberta consist of raw irrigable lands at about fifty dollars per acre which can be secured on long terms and with long term loans up to two thousand dollars for initial equipment, seed grain, stock, etc.; improved irrigated farms as well at from seventy-five to one hundred and twenty-five dollars per acre, and dry lands available at from fifteen to seventy-five dollars per acre according to location and degree of improvement.

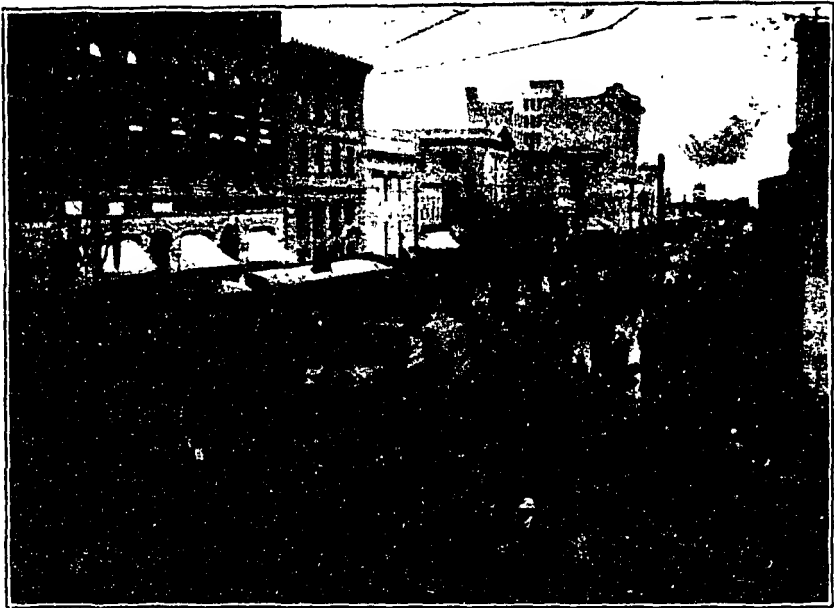
**Dry Farming.**—Dry farming is the name given to the practice of keeping land fallow every second or third year for the purpose of storing moisture and thus having an average of more than one year's moisture for one year's crop. The land is plowed deep so

that it will receive moisture readily and hold a good supply of it. It is worked on the surface to prevent the steady evaporation of moisture by capillary ascent. The surface working is carried on by disc and drag harrows. The packer is used to correct loose texture. Sometimes soiling crops are used to prevent blowing of land after it has been worked for a number of years, and the crops selected have some relation to the practice of dry farming. Dry farming requires good judgment, foresightedness and an understanding of the principles and practices underlying moisture conservation.

There is an important belt of country lying between the foothills and the open prairie that is suited to mixed farming and is a highly productive area. It begins at Cardston and follows a line bending westerly for a short distance parallel to the mountains, through the Pincher Creek country and finally running north in the general direction of the Calgary and Macleod and of the Calgary and Edmonton Railway. Claresholm is on the eastern fringe of this area. This country supports such market towns as Nanton, High River, Okotoks, Crossfield, Didsbury, Olds and Innisfail. At the latter points the stock business is represented partly in special dairy enterprises, but also in pure-bred and commercial stock as well. A good many of the farmers in these districts are still using a heavy top of natural grass, and cultivation is concerned chiefly with the raising of feed grains, roots and fodders such as green feed, timothy and other tame grasses. These lands are heavy and enduring in quality.

**Mixed Farming.**—The part of the province which has developed chiefly in mixed farming is Central Alberta. The putting through of the Transcontinental Railway which reached Calgary in 1885 necessarily had a good deal to do with increasing and distributing population both north and south of Calgary itself. From its establishment in 1875 and for a considerable number of years afterwards Calgary was the centre of Alberta land and commercial interests. Owing to the moderate character of the Alberta climate the tendency to develop northward has always been strong. Settlers who travelled north from Calgary found themselves on black lands with a heavier top of grass than grew on the prairies of the south and with an increasing growth of scrub and finally bluffs of poplar dressing the open stretches the farther north they went. The first side feeder to the main line of the Canadian Pacific Railway was built northward from Calgary in 1891 to penetrate this stretch of land in the country between Calgary and Edmonton. The country tributary to the Calgary and Edmonton railway and to the two more recently built north and south lines of the Canadian National Railways is one of the best developed and heaviest producing areas of the province. The land in Central Alberta does not offer the same opportunities for broad farming in its virgin state that Southern Alberta does. It is more of a country of homesteaders who have to apply a little labour to land in order to tame it and who are generally satisfied with smaller holdings. The land appears to be too valuable for the simple type of farming represented in straight grain raising.

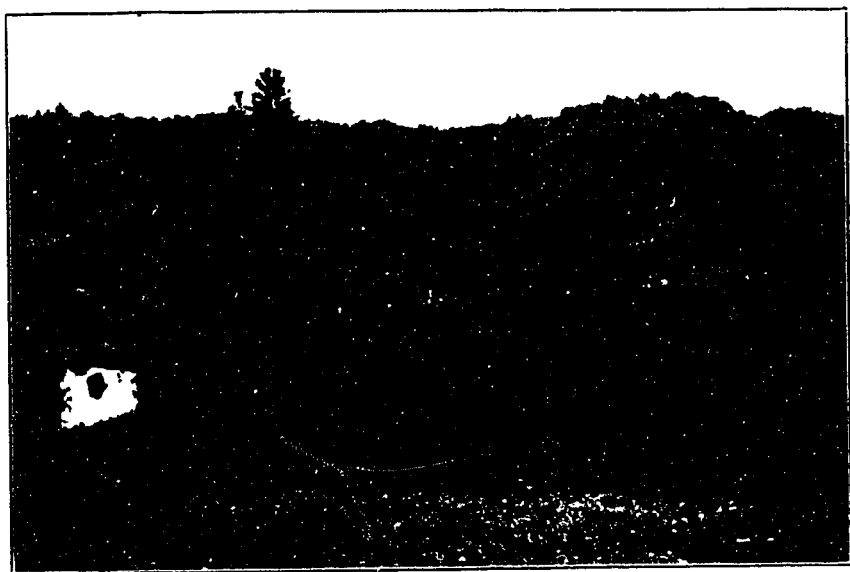
The characteristic crops grown are the feed grains such as oats and barley, which yield very heavily, together with green feed and other cultivated fodders and roots, but wheat is also a successful crop. The products of the farm are generally marketed as dairy products, beef, mutton, wool, pork and poultry. Central Alberta is essentially a mixed farming area and it necessarily attracts a class of settlers and home-makers of a permanent and industrious sort.



**Edmonton Street Scene**

To people in Eastern Canada or in the United States, Edmonton, which is between latitudes 53 degrees and 54 degrees, seems away up north, but it is now a modern every day city of sixty thousand people, it is fully integrated with the commercial and political life of the Dominion and has all kinds of modern services. It is the gateway to a new frontier which is two or three hundred miles north. Northern Alberta is synonymous with the Peace River Valley which is the Mecca of the land man who wants to get out on the edge. The town of Peace River is two hundred and fifty miles north-west of Edmonton on a branch of the Edmonton, Dunvegan & British Columbia Railway. It is a town of a thousand people and has a tributary population along the north shore of the river of seven or eight thousand successful farmers including ranchers. Fifty miles on this side of Peace River the main line of what is expected to be a permanent transcontinental railway system goes west to the town of Spirit River. The approach to Spirit River opens out into an area of farm land which exactly reproduces the Edmonton district. It is strong, heavy, black land with just a

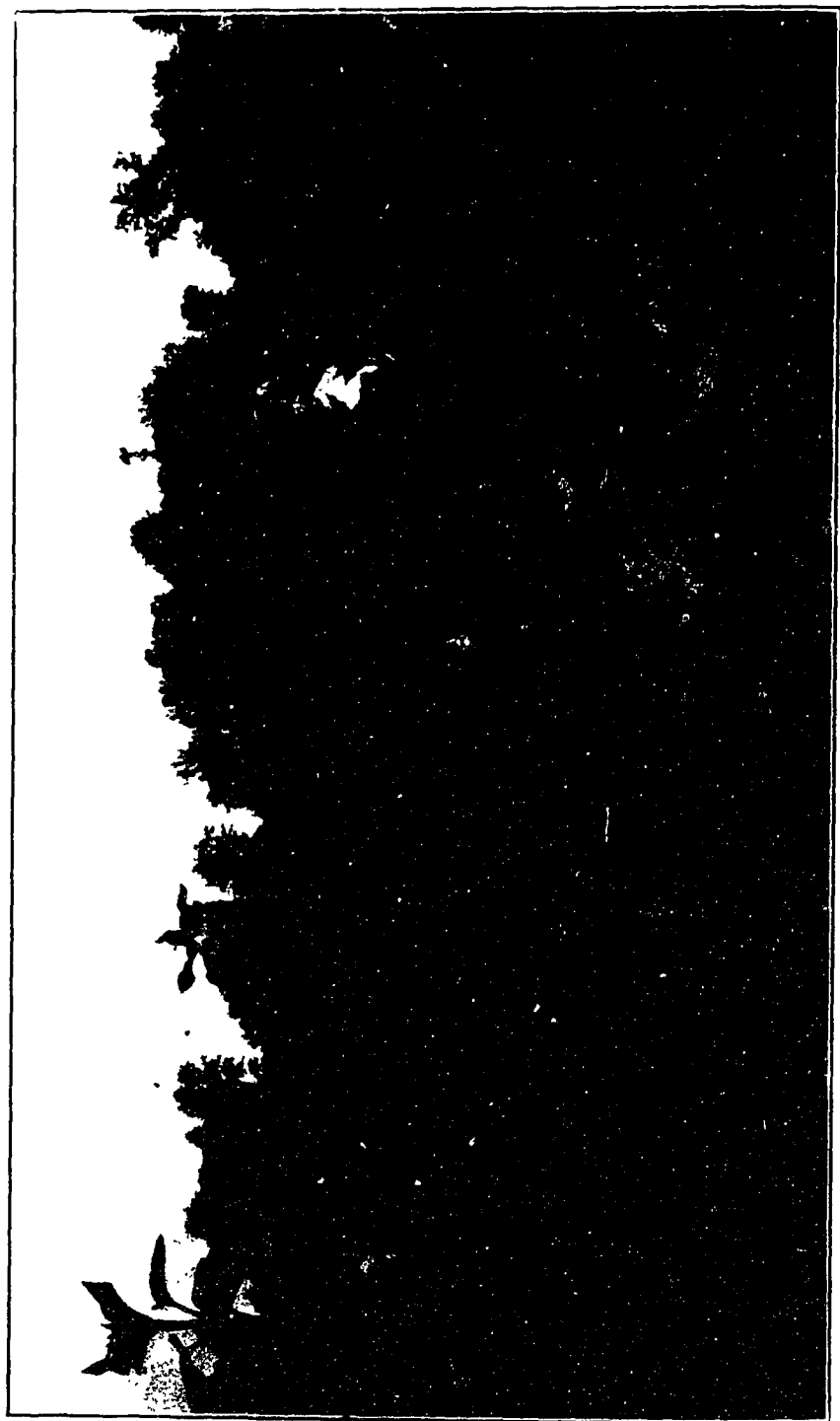
little willow and other scrub and with an occasional poplar bluff dressing the landscape. The McLennan-Spirit River line is projected directly west into the Pouce Coupe country. South from Spirit River a stub line fifty miles long terminates at Grande Prairie which is the largest town of the Peace River country. Like Spirit River it has very active settlement both east and west. It, at the present time appears to be the most active of any of the settlements in the Peace River country. The Peace River country this year is expected to yield between five and ten million bushels of grain.



**Ranching Scene in the Homestead Country, Spirit River**

On the fringes of these agricultural settlements are a small number of ranch settlements on the Wapiti and Smoky Rivers, south and east of Grande Prairie in occasional stretches, west of Grande Prairie and Spirit River, then as far west as Fort St. John, where there are a number of small cattle ranches. Immediately east of Peace River a few ranches are developing and a few others towards Fort Vermilion on the north side of the river.

Northern Alberta already holds fifty thousand souls—all two hundred miles or over north of Edmonton—and the greater part of civilian and soldier settlement is headed in the direction of Peace River. This country is making rapid advancement in institutional services likewise. There are good schools over the whole of the district, and municipal hospitals, which are certain of efficient support and direction, are being established in a number of the important centres of the Peace River district.



The New Silage



## BRANCHES OF AGRICULTURE

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**Field Crops.**—Alberta is adapted in varying degrees to the growing of the whole list of small grains including wheat, oats, barley, rye, peas and flax. Certain cereals are pre-eminent in certain districts but all of the cereals can be grown profitably and successfully from Medicine Hat to Fort Vermilion.

The soil of the province consists of a finely divided basis of glacial drift topped by accumulations of vegetable mould varying in depth from a few inches to several feet. The black soil belongs characteristically to the centre and north. In the southern part of the province while the depth of humus is not great the nitrogen content is high as the soil of the great grain area of the province in the south is not subject to leaching by excessive precipitation. The soils of Southern Alberta excel in looseness and fineness and in the easy availability for plant support of both humus and mineral elements in the soils. This area is given over largely to wheat growing, and while the tendency to rely on the single crop has not the same safety that mixed farming has, a great wealth of grain has been produced on the Southern Alberta soils. The wheat is of the best hard quality and very high yields have been secured. In 1915 the average yield per acre in spring wheat throughout the province was 35.93 bushels; winter wheat was 39.37; oats 57.66; barley 34.11; rye 24.14 and flax 13.57. The heaviest yields of wheat were in Southern Alberta. The general average for the province over a period of ten years including the latest available figures is as follows:

|                        |       |
|------------------------|-------|
| Spring Wheat . . . . . | 20.34 |
| Winter Wheat . . . . . | 22.61 |
| Oats . . . . .         | 37.65 |
| Barley . . . . .       | 26.81 |
| Rye . . . . .          | 24.48 |
| Flax . . . . .         | 8.63  |

The best yield of wheat recorded over a large acreage is that of the Noble Foundation in the year 1914 in which 54,330 bushels were grown from a thousand acres of measured land giving an average of 54.3 bushels per acre. An example of the suitability of Southern Alberta land for wheat production is the fact that the Turkey Red wheat introduced from Kansas increased in weight four or five pounds per bushel after being grown in Alberta and a special grade was made for it on the Winnipeg market. While a greater part of the wheat of the province is grown in Southern Alberta it is a successful crop throughout Central and Northern Alberta. Large yields have been secured in the Peace River valley as far north as Fort Vermilion.



**A Strip of the Alberta Harvest**

The superior quality of Central Alberta oats is recognized throughout Canada. At one of the provincial fairs in the province the ten best samples entered in one competition exceeded fifty pounds per bushel in weight. Yields on new lands have given as high as 136 bushels per acre and 80 bushels per acre is quite common. Both Alberta oats and wheat are making for themselves a good market for seed purposes in Eastern Canada, Eastern United States and especially in the upper tier of States on the other side of the International Boundary. The seed is plump and bright and by reason of its being grown well north is of hardy constitution. The oat is valued, however, principally for feed for cattle, horses, sheep and swine. While barley makes a better finishing feed for hogs than oats do, hogs may be finished successfully on Alberta oats. Pending the introduction of a variety of tame fodders the oat crop is made great use of as green feed on which all kinds of stock are wintered. It also makes fine silage. Barley is a successful crop and shows the same tendency for good weight per bushel as is shown by wheat and oats. Rye is not grown extensively or exclusively for grain but is becoming a very important crop in all parts of the province. Winter rye is used to furnish fall feed and early spring feed. At the end of June it may be left for hay or grain, or it may be summer-fallowed.

Peas are not yet extensively grown in the province but are sometimes used along with oats for winter fodder and for silage. They are a successful crop on irrigated lands in Southern Alberta either for seed or for pasture for hogs. Good results and profits are secured from the use of ripening peas for hogging off. Flax is a successful and profitable crop at all times and is used in many cases on breaking on account of its suitability for putting the soil in good condition for the next year.

**PROGRESS IN GRAIN PRODUCTION**

|      | Wheat<br>Bushels | Oats<br>Bushels | Barley<br>Bushels | Flax<br>Bushels | Rye<br>Bushels |
|------|------------------|-----------------|-------------------|-----------------|----------------|
| 1909 | 8,467,799        | 24,819,661      | 3,310,332         | 131,531         | 25,801         |
| 1910 | 7,904,520        | 12,158,530      | 1,889,509         | 46,155          | 28,306         |
| 1911 | 20,066,987       | 27,604,993      | 3,037,584         | 153,908         | 38,722         |
| 1912 | 19,830,649       | 37,085,234      | 6,287,112         | 1,196,416       | 54,119         |
| 1913 | 21,610,233       | 44,078,325      | 8,645,812         | 799,653         | 370,661        |
| 1914 | 15,939,287       | 34,597,117      | 7,847,640         | 207,115         | 261,843        |
| 1915 | 60,088,689       | 90,582,694      | 12,761,187        | 569,762         | 291,399        |
| 1916 | 41,610,946       | 60,798,239      | 8,477,232         | 574,700         | 212,503        |
| 1917 | 52,829,012       | 85,726,170      | 9,984,789         | 777,690         | 764,828        |
| 1918 | 23,751,519       | 60,322,717      | 7,756,204         | 479,600         | 825,878        |

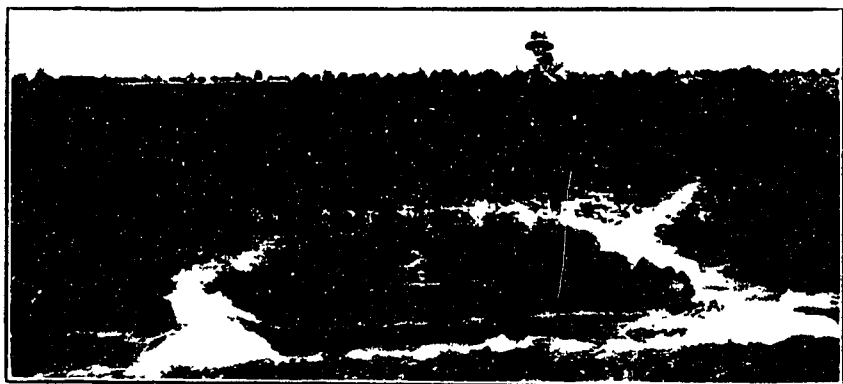
**Frosts.**—In the taming of new land frosts commonly occur and reports of frosts are more or less common in countries where settlement is taking place. These frosts are due to the coolness or low temperature of closely packed, undisturbed virgin soil. It takes three or four years of cropping and cultivation to get virgin soil properly worked down into a fine state of tilth. When it is worked down warm air penetrates it, but if it has not been broken, or if it has not been pulverized after it has been broken, the warm air does not get in. The lying of stagnant water is another cause of frost as is commonly seen in dead, low hollows. Frosts occur in conditions of this kind while warm high land is not subject to frost. When land is first plowed, however, the dead water level represented in the hard surface is let down six or seven inches and the land becomes drier and warmer. What frost means in summer is that the heat of the land radiates to a point that leaves the air at the surface of the ground too cold for the safety of plants. After the soil is open and the warmth gets well into the soil this supply of warmth is not as rapidly exhausted as it is when the depth to which air penetrates is shallow.

Frosts in Alberta are not the result of unfavourable climate, but are incident to pioneer conditions. It is a matter of authentic history that Selkirk failed for years in succession to mature grain crops in the Red River Settlement, and at one time it was thought that the colony would have to move. This was in the country that is now the best grain-producing country in the world. The land had not been opened and warmed. There is probably something likewise in the wealth of fertility in virgin soil that prolongs the growing period. Besides getting rid of dead water and admitting air to the land the danger of frost is likewise reduced by the removal of bluffs or brush and timber which hold moisture late in the season and feed it into the crop. Early seeding and the use of early varieties likewise have their effect. The danger of damage from frosts may be met by the art of the cultivator except in cases of gross, unseasonable mistakes by the weatherman which are entirely outside of the control of the farmer.

Visitations of hail are in the same class. Hail occurs occasionally in small scattered patches in Alberta but not to the extent of injuring any appreciable proportion of the crop area. Losses from hail in Alberta are distributed by the operation of The Municipal Hail Insurance Act. Under this Act the ratepayers of a municipal district elect whether or not the district shall be brought under the operation of the Act. In case the voting is favourable all ratepayers are automatically insured and losses within the municipal districts are met by assessment of ratepayers. Individuals, however, may withdraw their lands from the operation of the Act by notice to the secretary-treasurer of the municipal district before June 16th.

**Forage.**—A large proportion of the forage grown in the province consists of green oats but the tame grasses are being introduced in the best settled parts of the country. Alfalfa is a highly valuable

and profitable crop in the irrigated areas. Over forty thousand tons were produced in the Lethbridge district this year and the yield was about three and a half tons per acre. In addition to being the leading crop on irrigated lands alfalfa is grown successfully on unwatered lands in other parts of the province. Corn is established as a successful silage crop in Southern Alberta. It succeeds in favourable years well into the centre of the province also but oats will produce about as great bulk and weight and is a satisfactory silage crop in Central and Northern Alberta. In Southern Alberta the growing of corn takes to some extent the place in rotation that summer fallow does. Light seeding and good cultivation does not exhaust the moisture unduly and puts the soil in good condition. The crop prevents blowing and furnishes fibre to the soil. The variety of corn most used is North-Western Dent. Recent experiments with sunflowers for silage promise good results. As high as fourteen or fifteen tons of green silage, which is about twice the amount of oats or corn, can be grown from the Mammoth Russian sunflowers.



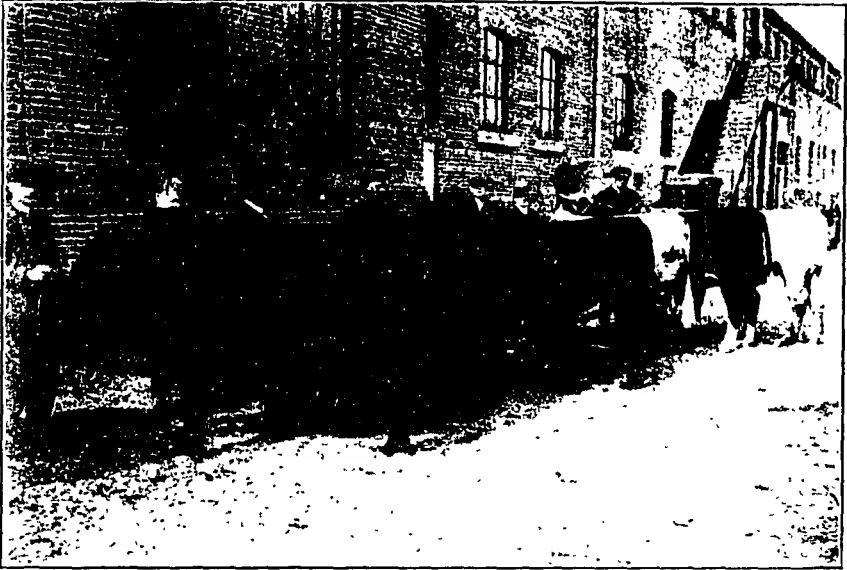
**Irrigating Alfalfa at Lethbridge**

In the best mixed farming parts of the province, consisting of the foothill country in Southern Alberta and the country between Calgary and Edmonton, timothy is a successful crop. It is also a highly profitable crop for seed. Other tame grasses are Kentucky blue grass, brome grass, rye grass, white, alsike, and sweet clover. Grain mixtures such as oats, barley and fall wheat are extensively used for hog pasture. Rape is a highly successful forage crop and is available earlier than in most places. On account of the coolness of Alberta nights it does not suffer bleaching or wilting in midsummer.

**Roots.**—The soil of Alberta is suited for heavy production of field roots. Turnips, carrots, mangolds and sugar beets are successful field crops.

**Beef.**—The raising of beef cattle has always been important in Alberta. It is to be expected that specialization in the cow industry will take place in every country with the general progress of

the country, and this has been the case in Alberta. As late as 1900 the whole of Southern Alberta was given over to pastoral work with cattle, horses and sheep; but chiefly cattle. A good deal of the cattle business of Central and Northern Alberta was also of simple range type. With the progress of settlement, dairying has come into importance on account of the need of securing a steady



**Beef at Edmonton**

kind of revenue and higher revenue from increasingly valuable lands. On the farms of Central and Northern Alberta dairy work is not special, however, and the type of cow is the dual purpose cow. It has been found good practice on small general farms to keep cows of the beef breeds that will raise easy-feeding, quick-maturing steers, but likewise to select the herd with some regard to their performance at the pail. As in countries like Great Britain where live stock is the crown of farming it is the case that over seventy-five per cent. of our dairy wealth comes from dual purpose cows. Special dairy enterprises are largely limited to the close neighbourhood of cities and towns and are engaged in supplying whole milk for families. While dairy production has shown satisfactory progress, the cow business in Alberta is dominantly the raising of beef cattle. There are different aspects of the growing of beef cattle itself outside of the keeping of dual purpose cattle on the average farm. These may be said to be ranching, baby beef production, and the raising of purebreds.

**A Royal Rancher.**—While ranching is popularly associated chiefly with the open prairie of Southern Alberta, this land has nearly all passed into use for farming. There is still, however, sufficient land devoted to ranching to make it necessary to take account of this work as part of the live stock interest of the province.

There is some very attractive ranching land in the foothill country west of the Calgary and Edmonton railway. This consists of rolling land with good grasses on the knolls, excellent live springs and running water and plenty of natural shelter. The country is highly attractive from the standpoint of the stockman, home-maker, and sportsman. It is on the skirts of the timber country where big game runs. It has good trout-fishing in the streams and abundant bird life. The air of these elevated portions is agreeable and exhilarating. It is in the foothill country about twenty-five miles south-west of High River that the Prince of Wales recently purchased his ranch. The combined attractions of luxuriant feed, good water and shelter and the variation of landscape between bench land and coulee, the freshness of the near mountain air, and the general favourable location of the property conspired to make an Alberta rancher of His Royal Highness. This property is being stocked with a good class of Shorthorn cattle, Shropshire sheep, and Dartmoor ponies from the Old Country.

The superiority of Alberta range beef is accounted for by the superiority of the range grasses, the climate and the using of good beef bulls. The grasses of the Alberta range cure on the stalk and the finishing season of the summer and fall is favourable to stock. There is no scalding from the sun, no sultry nights and no cold and wet combined. The range cattle-men have always bought the best bulls obtainable of the Shorthorn, Hereford, and Aberdeen-Angus breeds. The excellence of these cattle is shown in the frequency with which they have topped the Chicago market for grass cattle. Besides the beef raised on the foothill ranges there is some raised on proprietary ranches of the prairie country, on leased lands in the eastern and central part and also on the edges of the settled parts of the Peace River country.

On account of the demand for all classes of meat supplies during recent years meat production of all kinds has been stimulated. On many of the farms as well as on the ranches good outputs of beef cattle have been made. Under the encouragement of the exhibition associations and school fairs, likewise, baby beef production has been greatly stimulated and excellent fat calves are coming forward at the fairs. This kind of meat stock is becoming important in a commercial way.

The demand for purebred stock is very active and the establishment of purebred beef herds has been going on rapidly. The feeds available are of the best possible kind for producing high-class breeding stock. The mixed grasses give fine combined development of bone and right flesh covering, the supply of feed grain such as oats and barley is large and the cost of production low. Roots and winter forage such as green-feed, tame and natural hay are equally plentiful. The cost of shelter is not high, as expensive barns are not considered necessary except for dairy stock. Winter feed should be provided for all classes of stock in Central and Northern Alberta. In limited cases in Southern Alberta young stock may find a living outside. The capitalization in land is moderate. Good herds are already well established and the demand for purebred stock is steady and active. Selling services are well established

through exhibitions, breeders' associations, bull sales and congress sales by groups of breeders. Five-thousand-dollar youngsters in both males and females have been bought and sold by Alberta breeders. Young Alberta Shorthorns have taken high places at the International in the last exhibition (1919). Shorthorns are most common in Alberta but Herefords are popular, especially in Southern Alberta, and good herds of Aberdeen-Angus are widely distributed in the province. The largest purebred herd of cattle in Canada is owned in Alberta—the Hereford herd of F. Collicutt at Crossfield.

Some idea of the growth of the cattle industry may be had from a survey of the census figures:

|               |           |
|---------------|-----------|
| 1910..        | 672,709   |
| 1911          | 739,850   |
| 1912.         | 735,229   |
| 1913. . . . . | 779,293   |
| 1914          | 812,100   |
| 1915          | 843,974   |
| 1916..        | 1,160,090 |
| 1917..        | 1,535,294 |
| 1918..        | 1,691,582 |
| 1919..        | 1,584,044 |



**A Small Dairy Herd in Central Alberta**

**Dairying**—Alberta has made rapid and substantial progress in dairying. There is still on nearly every farm a good deal of native pasture which is made up of a fine mixture of grasses, pea-vine and other succulent forage, and this mixed pasture is an important resource for the dairyman. Besides this, in Central and Northern Alberta especially, the heavy black lands produce great quantities of feed grain such as oats and barley, and also produce heavy crops of roots and of cultivated forage such as fall rye and grain mixtures of different kinds. The climatic conditions are likewise favourable. The winter is free from trying extremes and the summers are equally conducive to successful dairy work. The nights are cool, which makes the keeping of milk easy and is favour-

able to the health and comfort of dairy cattle. There are no troublesome flies or other insect pests. The industry has been carefully fostered since the province was inaugurated. The Department of Agriculture employs an experienced dairy commissioner with a competent staff to carry on the education of milk producers and manufacturers and keep in touch with the trade. The dairy commissioner likewise markets a good deal of the creamery butter output which is consigned from producers and on which advances are made pending sale.

In 1918 the exhibits of butter-makers from the Province of Alberta at the nine largest fairs of the Dominion resulted in the securing about half the awards for the Alberta product. In the 1920 All-Canada competition among creamery butter-makers at Winnipeg, Alberta secured first, second and third prizes. The market for Alberta butter extends to both the Eastern and Western States through distribution from Toronto, Montreal and Vancouver. The supply for the Yukon is practically all Alberta butter.

There are fifty-three co-operative creameries in the province, thirteen privately owned creameries, and a number of large centralizer creameries in the cities. The co-operative creamery is the original kind. These were once government owned or partly government owned and operated, but they are now community owned and operated; and the Commissioner and his staff still carry on instruction and inspection. In these creameries patrons are paid on grade for their cream. They usually get an advance per pound of butter fat equal to the price of butter itself and have the two-tenths over-run to the good at the end of the year. The grade standards for cream and butter are set by The Dairymen's Act. In the privately owned and operated creameries the owner buys the cream outright. These get the same encouragement and assistance towards doing good work that the community creameries do.

The central dairies not only deal in whole milk, but purchase quantities of cream through collecting branches or cream-buying stations and they manufacture both butter and cheese. The Edmonton City Dairy is the largest creamery in the Dominion. It collects cream from distances of three hundred miles in all directions, it operates a number of subordinate creameries, small cheese factories and in addition to its milk distribution and ice cream business manufactured two million pounds of butter and half a million pounds of cheese in 1919. Sixty-six per cent. of the creameries of the province are north of Red Deer.

Cheese-making has not made great progress. Farmers like to raise their young stock and for this purpose prefer to sell cream rather than whole milk. Cream is more easily handled than milk on account of its smaller volume and is less subject to spoiling. There are eleven cheese factories in the province.



The progress of dairy interests is indicated in the statistics given below:

#### Number of Dairy Cows in the Province

|      |         |
|------|---------|
| 1910 | 94,671  |
| 1911 | 156,760 |
| 1912 | 164,989 |
| 1913 | 175,367 |
| 1914 | 192,903 |
| 1915 | 210,000 |
| 1916 | 215,033 |
| 1917 | 323,861 |
| 1918 | 328,702 |
| 1919 | 336,596 |

#### Total Value of Dairy Products

|      |                 |
|------|-----------------|
| 1910 | \$ 7,855,751 00 |
| 1911 | 12,971,989 15   |
| 1912 | 12,646,532 57   |
| 1913 | 13,405,324 52   |
| 1914 | 14,611,803 72   |
| 1915 | 15,895,586 00   |
| 1916 | 18,466,311 00   |
| 1917 | 24,794,597 00   |
| 1918 | 27,500,000 00   |
| 1919 | 31,625,000 00   |

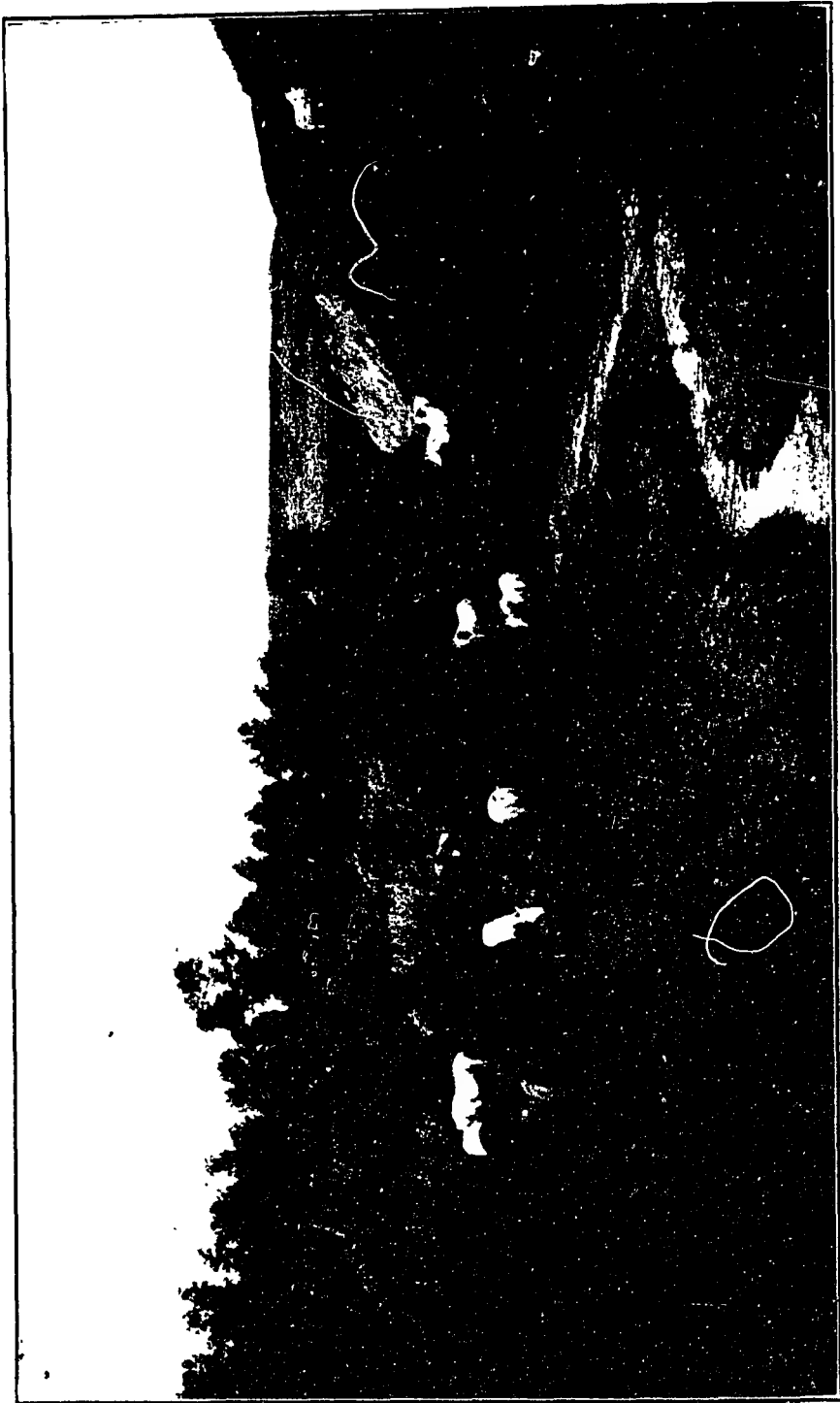
#### Production of Creamery Butter

|      |                |
|------|----------------|
| 1910 | Lbs. 2,315,000 |
| 1911 | " 2,543,368    |
| 1912 | " 3,010,755    |
| 1913 | " 4,115,587    |
| 1914 | " 5,444,806    |
| 1915 | " 7,544,148    |
| 1916 | " 8,521,784    |
| 1917 | " 8,944,171    |
| 1918 | " 9,053,237    |
| 1919 | " 10,500,000   |

#### Production of Cheese

|      |              |
|------|--------------|
| 1910 | Lbs. 220,000 |
| 1911 | " 100,000    |
| 1912 | " 40,000     |
| 1913 | " 70,716     |
| 1914 | " 70,581     |
| 1915 | " 381,632    |
| 1916 | " 745,122    |
| 1917 | " 1,274,905  |
| 1918 | " 552,834    |
| 1919 | " 500,000    |

**Horse-breeding.**—The raising of horses has always been of importance in the province. The horse constituted the working equipment of early cattle-land. He is a necessity for the cowman, and on account of this very obvious necessity and the feature of education and steady use and companionship the cowman became skilled and wise in the horse business and always took an interest and pride in a good animal.



Conditions Favourable to Horse-breeding

There were horses in the country before there were cattle. These commonly came under the general name of bronco which is the term originally given to the half-wild pony of Western Canada and the United States. This species is known as the mustang in Mexico and as the Indian pony or cayuse in Western Canada. The ponies that were found among the Indians on the arrival of white settlers in Western Canada no doubt originated in the south. These Indian ponies as a breed are becoming very rapidly eliminated but it is probably the case that not less than ninety per cent. of the horses of the province are grades of the improved breeds such as Clydesdales, Percherons, Shires, Belgians, Hackneys, thoroughbreds and standardbreds on cayuse mare foundation. The native pony is not commonly a very sightly animal though some of the tribes of Indians have taken a good deal of pride in their horse stock and have developed attractive, symmetrical animals. They all have qualities, however, that may be assumed to have contributed something valuable to our present horse stock. On account of the way that broncos or cayuses are raised they usually have good wind, good digestion and general hardiness. They are also active and sure-footed. They have rather good feet, a good quality of bone and keen senses, particularly eyesight. On the other hand they lack the fullness of conformation that results from culture represented in shelter, careful feeding and education. They are generally sloping and light in the hindquarters, low in the shoulders and neck, and heavy in the barrel.

A number of ranchers in the early days introduced thoroughbred and other light-legged horses for the improvement of this stock and no doubt secured enduring saddle stock, but the combination of warm-blooded horses with the wild prairie horses did not result in any improvement of the horse stock of the country and most of the improvement has been brought about by the use in the first place of moderate sized or undersized Clydesdales and Percherons followed by the use of heavier horses on subsequent crosses. Cold-blooded stock is the best kind for the amelioration of the wild blood of the prairies. This method is accepted as the best by which to secure useful stock. Most of the horse stock of the country represents good grades of the improved draft breeds, but as a rule they are not very large as the natural conditions of feed and climate encourage simple care in winter-time. These moderate sized crossbreds and grades have proved themselves hardy and reliable for war use. In the South African war the Alberta range horses were popular on account of their being strong, sound and active. A number were purchased from Alberta for the late war also but the use and demand for this purpose were limited. The very small stock is disappearing rapidly and generally the breeding and quality of horse stock in the country is rather good. Good stallions have been brought in in large numbers, the government restricts the use of unsound sires, and horse-breeding is progressing on satisfactory lines. Some fluctuation has been caused by the introduction of motor power. This has operated chiefly against the lighter horses. The light car is a great time saver for the farmer.

Tractors to the number of about five or six thousand are likewise operating in the province and the introduction of these has had greater present effect than it should have on the industry. After the initial breaking has been done in both the open prairie and the heavier brush land the need and economy of horses for most kinds of work, except stationary work, around the farms will result in a steadiness in the horse-breeding industry.



The conditions that are favourable for horse-breeding in Alberta are well drained soil, due to a rolling surface and well defined slope, a fine quality of grasses, excellent water, a good climate and freedom from epidemic troubles, and the light nature of bronchial or pulmonary disorders. There are already well established enterprises in the raising of purebred stock. A good many of these are in Southern Alberta. Mr. George Lane's Percheron ranch at High

River is stocked with about a thousand purebred Percherons and is probably the largest purebred Percheron ranch in the world. A number of shipments of both mares and stallions have been made to Great Britain. Purebred Clydesdales are also well established. Breeders of this class of stock are widely distributed over the province. There are also Shires, Belgians, and a small number of breeders of light-legged stock.

The trend of horse-breeding is shown in statistics relating to the industry:

|      |         |
|------|---------|
| 1910 | 254,197 |
| 1911 | 365,296 |
| 1912 | 577,571 |
| 1913 | 580,120 |
| 1914 | 609,125 |
| 1915 | 620,000 |
| 1916 | 621,200 |
| 1917 | 718,317 |
| 1918 | 791,246 |
| 1919 | 800,380 |



Alberta Range Sheep

**Mutton and Wool.**—The Province of Alberta is eminently suited for the production of mutton and wool. The country is slightly rolling and the climate is highly favourable for sheep-keeping. Foot troubles and epidemic skin troubles are practically unknown. The grasses are of the kinds relished by sheep and the cultivated crops required for winter feeding such as hay, green-feed, the feed grains and roots are easily and cheaply grown.

The changes in the values of farm products recently have been favourable to the increased keeping of sheep. Prices have been so high for feed grains that such stock as required concentrated rations for finishing has not been found to be as profitable as meat stock that can be produced and matured on grass and milk alone within a summer season and that can be carried over winter on low grade feeds. Sheep likewise are helping to keep the grain farms and summer-fallows clean. Wool is high and will continue so. Double returns, and quick returns, and cheaply secured returns are having a good effect on the status of sheep husbandry.



**The Hampshire in Alberta**

Practically all the sheep of the province were formerly run on the prairie of Southern Alberta and nearly two-thirds of the total are still in Southern Alberta, where they run in large bands in the open areas between the enclosed lands. Sheep have proved highly profitable to sweep off the native grasses. With the contraction of the range country by settlement there has been a gradual transference of the business of sheep-keeping to the farms of Central Alberta and farm flocks are increasing rapidly. The sheep of the range were chiefly Merino from Montana, but English breeds of mutton rams are used to give greater size to the lambs raised on the range. Long-wooled rams are rather popular. The sheep of the mixed farming districts are chiefly the medium-wooled breeds of English sheep, such as Shropshire, Oxford, Hampshire, Suffolk, Southdown and Dorset. There is one flock of Karakul sheep in the province.

The market for wool and mutton and for purebred stock is good. About ninety per cent. of the wool clipped is sold directly in primal markets through the Canadian Co-operative Wool Growers' Association, Limited. The collecting of this wool is done by half a dozen local wool growers' associations in the province. Lamb and fed wether have sold above the best beef during the past five years. Ram sales are conducted each year at a number of points and the demand is steady at good prices. Alberta supports more sheep than the other three western provinces together. The growth of the industry is indicated by the number of head given below:

|                |         |
|----------------|---------|
| 1910 . . . . . | 155,301 |
| 1911 . . . . . | 182,787 |
| 1912 . . . . . | 366,946 |
| 1913 . . . . . | 417,657 |
| 1914 . . . . . | 501,188 |
| 1915 . . . . . | 525,000 |
| 1916 . . . . . | 539,100 |
| 1917 . . . . . | 276,966 |
| 1918 . . . . . | 332,179 |
| 1919 . . . . . | 364,498 |

**Swine Husbandry.**—All of the conditions for successful swine-husbandry are present throughout Central and Northern Alberta and in the irrigated districts of the south. Dwarf Essex rape, winter rye, white clover, Kentucky blue grass and alfalfa in places produce succulent pasturage from early spring until the late autumn in quantities surpassed by few districts in North America. The grains necessary to growing and fattening hogs, such as oats, barley, and rye yield well. The demand for pork will absorb many times the quantity now being produced.

At Edmonton there are three packing plants, the Swift Canadian Company, P. Burns & Company, and Gainers Limited, with a capacity ranging from one hundred to fifteen hundred hogs per day. In addition to the buying capacity represented in these firms there is at Edmonton open competitive marketing provided by the Edmonton Stock Yards Company. This open market was established in 1916 and has made phenomenal progress in the scope of its operations. In addition to local demand, buyers attend this market from all the large packing centres in the Dominion of Canada and likewise from the northern centres of the United States.

There are two abattoirs at Calgary, P. Burns & Company and the Western Packing Company. There is likewise at Calgary an open stock yard in which buyers from Toronto, Winnipeg, Moose Jaw and Vancouver operate, as well as dealers from Spokane, Seattle and St. Paul who buy periodically.

Climatic conditions in Alberta are highly favourable to swine growing. There are occasional periods of low temperature but the cold months are dry months and are free from sudden changes to extreme wet. Close and elaborate winter housings are rapidly being discarded for winter shelters, which are found to be much more economical and better suited to our conditions. These shelters consist of straw sheds or deep straw covering of simple board pens. For summer use the A-shaped or other small colony pen is rapidly growing in favour to give protection against rain during the early summer season.



**Types of Young Sows**



The type of hog being produced in Alberta might be described as medium thick. It ranks about midway between the extremely long, lean bacon type of Eastern Canada and the thick lard type which is produced in such large numbers in the American corn belt. Being grown largely on oats supplemented by pasturage, they develop strong bones and muscle and stand marketing well over long distances; and being fattened largely on barley or a mixture of barley and rye or wheat, they produce a sweet firm bacon that is accepted in the most fastidious markets. Settlers from Ontario and Great Britain usually bring with them pigs of Yorkshire, Tamworth, or bacon type Berkshire breeding, but they find that in a very few generations they lose their distinctive "bacon type" conformation and develop thicker backs and larger hams than the original stock possessed. Settlers from the United States usually bring with them their Poland Chinas, Duroc Jersey and lard type Berkshires, but in a few generations they find that their pigs have lost somewhat their thick backs and heavy hams and have acquired a longer and deeper side to compensate for this loss of thickness of back and ham.

To the man who understands the nature of swine and brings his methods into harmony with local conditions, Alberta offers excellent opportunities for acquiring wealth in the swine-growing business.



**Root Harvesting on the Demonstration Farm**

**Poultry.**—Climatic and general conditions in Alberta are particularly well suited to poultry raising. There is always an ample supply of cereal grains and screenings available to farmers at production cost which may be profitably transformed into poultry products. There is an abundance of open range for poultry over clean, sanitary soil. The long days of spring and summer and the bright sunshine promote the health and vigor of young growing stock. The climate at no time is too severe for the economical production of eggs with practically all of the utility breeds. Poultry-

men throughout the province find no difficulty in producing winter or annual laying records that compare favourably with records made in any other part of the continent.

Both turkeys and geese do well in Alberta and there is a keen demand on the coast markets for what supplies the province has to ship. There is each year a considerable supply of eggs and dressed poultry for marketing outside of the province. The largest part of this goes to supply the Pacific coast markets while the remainder goes to Eastern Canadian markets and to Great Britain.

The poultry industry is given every encouragement by the government. Farmers are given assistance in the direction and management of their flocks by expert poultrymen who pass through the country. Foundation stock of high producing strains is made available to producers at nominal cost from the Provincial Poultry Breeding Station, and direct assistance is given by the Poultry Commissioner's branch in co-operation with the Poultry Branch of the Dominion Government in the organization of marketing associations and in the marketing of poultry products.

In addition to the Government Egg and Poultry Marketing Service there are twenty-one commercial houses in the larger market centres dealing more or less extensively in eggs and poultry, six of which operate large fattening plants for finishing poultry.

The keeping of poultry is universally popular. Of the 62,000 farms in the province over 50,000 of them report flocks of poultry. The value of the poultry output is not generally appreciated or known. The interest of farmers is chiefly in four-footed stock and this is to be expected. Poultry, however, not only makes heavy contribution to food supplies and resources but brings in large returns in money. Dominion census figures show that in 1916 the value of poultry products in Alberta was half as great as the value of beef cattle or swine and five times as great as the value of sheep. In the year 1916 the number of hens in the province was 3,172,777; in 1919 this had increased to 4,426,373.

**Horticulture.**—Alberta is eminently suited for minute culture and is a province of gardens. The soil in all parts is well fined and mixed and being new soil it responds very generously to good cultivation. The people of the towns and cities show keen appreciation of the value of the variety and quantity of fresh wholesome food which may be secured with slight labour from small plots of virgin soil.

Fruit-growing has not reached large proportions in the province. Experiments with apples of the hardy Russian sort have resulted in the production of good apples, but not yet in commercial quantities. Crab-apples are successful through Southern and Central Alberta. In Central and Northern Alberta there are a great many varieties of small tree fruits such as wild cherries, saskatoons and high-bush cranberries and there are great supplies of bush fruits such as raspberries, gooseberries, currants and blueberries. Strawberries are plentiful. Where these wild fruits are found the tame fruits of similar nature are successfully grown and are an important

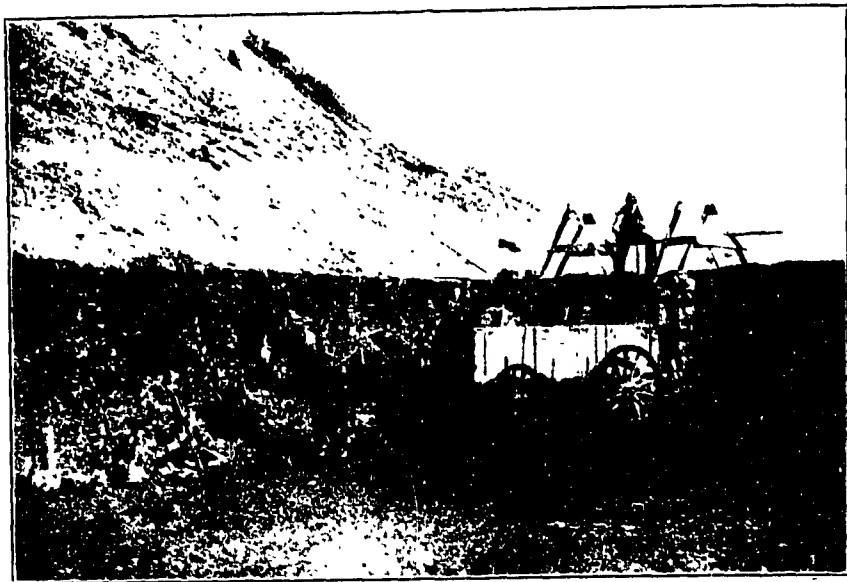
food resource on account of the scarcity of the larger fruits. On the irrigated lands of Southern Alberta heavy crops of currants, raspberries, strawberries, and gooseberries are grown and are highly profitable commercially.



**The Growing of Cabbage**

The most successful and characteristic garden crop of Alberta is the vegetable crop. Excellent potatoes are grown from the most southern point in the province to the Peace River. They grow rapidly and are of fine quality. Beets, carrots, cabbage, parsnips, celery, turnips, chard, onions, lettuce, radish, peas, beans, squash, pumpkins, asparagus and rhubarb do well in every part of the province. Cucumbers and tomatoes are successfully grown in all parts of the province, but in the north they require suitable position with reflected heat and southern exposure to give the best results. Sweet corn is grown to some extent over the whole of the province but does better in the southern part than in the centre and north. Squaw corn succeeds very well in every part of the province and is an important addition to good living.

The province is conspicuous for its great natural flower wealth and still more for the wealth and brilliancy of its garden flowers. All kinds of common annuals and most perennials do well, and ornamental trees and shrubs likewise.



Stripped Coal at Tofield

## MINERALS

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**Coal.**—Next to its agricultural resources the greatest source of wealth in Alberta is its minerals and these are of the useful rather than luxury sort. The most important of these is coal. Alberta stands first among the provinces in the Dominion in its coal area. Until recently the chief value of this resource has been the satisfying of local fuel demand. At present considerable expansion is taking place in supplying the other prairie provinces. While there is no known supply of iron adjacent to these vast fuel supplies it is to be expected that the vast fuel wealth of the province will ultimately support an important city and town industrialism based on agricultural and other raw materials produced in the province to accompany a condition of higher development of commercial centres. It has been estimated that the total amount of coal available in the province is 1,059,975 million tons.

East of the foothill area of the province lies a great extent of coal-bearing rocks. The coal in this region is well suited to domestic use and as it is within the settlement belt there is an assured demand for it. These areas are occupied by what is called the Edmonton formation and the coals are commonly referred to as the Edmonton coals. They extend north from near the International Boundary almost to the Peace River, underlying an area of not less than 52,000 square miles, of which 24,000 are considered as available for mining.

Another coal formation known as the Belly River formation occupies the south-eastern part of the province with an area of 11,568 square miles. The principal mines of this area are near Lethbridge.

The domestic coal mined in the province finds ready sale in the cities and towns; the bituminous, such as that mined at Canmore, the Crow's Nest Pass and Mountain Park districts, is generally used for railway and other steam-raising purposes. It is expected that the suitability of the steam coals for wider use will mean a much larger demand than there is at present and the coal fields will take on the aspect of an imperial rather than a purely local resource. At present there is an active development of mining which will largely increase the output.

The following table of tons will indicate the progress that has been made in coal production in the past ten years:

|          |           |
|----------|-----------|
| 1909..   | 2,174,329 |
| 1910.    | 3,036,757 |
| 1911 .   | 1,694,564 |
| 1912     | 3,446,349 |
| 1913. .. | 4,306,346 |
| 1914.    | 3,821,739 |
| 1915.    | 3,434,891 |
| 1916     | 4,648,604 |
| 1917. .  | 4,863,414 |
| 1918 ... | 6,148,620 |

The manufacture of coke has been receiving considerable attention during the past few years. In 1904 there was no coke produced in the province. In 1907 the amount was 73,782 tons and progress has been steady since that time. A briquetting plant which converts small coal and dust into a solid product is operating in the province.

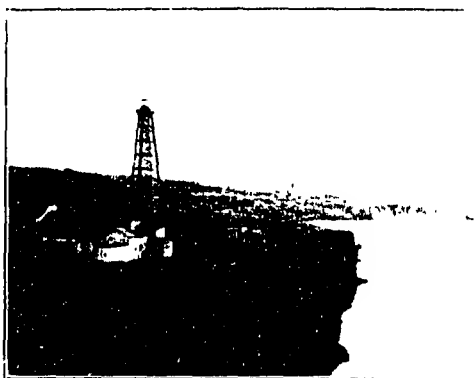
The mines which have been in operation longest are those in the Crow's Nest Pass and in the Lethbridge, Taber and Edmonton districts. Important mines which have been more recently opened up are those of the Brazeau, Yellowhead Pass and Mountain Park districts. These newer fields produce excellent steam and coking coals and their product is finding a ready market with the railway companies. Large deposits of high grade domestic coal have likewise been found in these districts and it is already adding to the surplus for trade outside of the province.

The coal industry is entering on a period of rapid expansion. Capitalists are being attracted by the extensive coal fields, particularly in view of the broadening of market demand both from outside and within the province where active immigration appears to be setting in.

The number of mines in 1905 was 61; it is now 269. Most of the mines on the transcontinental lines of railway are shipping as far east as Winnipeg and as far west as the Pacific Coast but many of the smaller mines are used for purely local supply. While manufacturing has not reached a great volume in the province the mining industry has developed and strengthened the commercial interests of the province. The mines give employment to a large number of men in the actual operations of mining and large numbers are also employed in obtaining supplies for these operations. A heavy business in supplies for the mining population is a feature of trading in all mining towns.

**Petroleum.**—Considerable attention is being given to Alberta as a possible source for the supply of petroleum for future use. Practically the whole of the province shows oil seepage. Prospecting is active at present. About a million dollars was spent within the year 1919 in Alberta by large and small corporations, companies and individuals in the search of supplies of petroleum. In 1918 13,040 barrels of crude oil were produced.

**Gas.**—Natural gas is well distributed through the cretaceous rocks which form the sub-structure of the province. In the southern part of the province there is an extensive field which in 1918 produced 6,318,389 thousand cubic feet from 74 wells. The chief development of the gas supply is in the Medicine Hat and tributary district. The large supplies of gas in the Medicine Hat district have developed



Oil Derrick at Peace River

an active industrial interest. The city of Medicine Hat has important manufactures. From the Bow Island field west of Medicine Hat gas is piped for domestic supply to both Calgary and Lethbridge. In Northern, Central and South-western Alberta the gas is "wet" whereas in the south-eastern part of the province the gas is "dry." The research work in the recovery of the lighter oils from gas indicates that there will be extensive exploitation of this field.

**Tar Sands.**—Bituminous sands containing 18.5 per cent. bitumen are exposed for 100 miles along the Athabasca River below Fort McMurray. The thickness of these beds varies from 25 to 200 feet. This material is already being used for paving and roofing purposes. The deposits have not been extensively explored but there are indications that crude petroleum may be found in certain parts of this district. The commercial possibilities of these deposits are large.

**Clay.**—Clays and shales suitable for the manufacture of various kinds of ceramic products are widely distributed. In 1912 the clay products manufactured in Alberta had a value of nearly one and a half million dollars, but the industry has not been active during the war. A large field for clays, shales and silica sands is open. There are four cement mills in Alberta with a daily capacity of 7,500 barrels.

**Salt.**—Salt is extensively distributed throughout the northern part of the province. Saline springs are common, some of which form a deposit of pure salt of commercial value. Two beds of salt having a thickness of nearly 200 feet have been reported from previous drilling records in the Fort McMurray district 200 miles



Salt Springs at Fort Smith

north of Edmonton. The government is carrying on drilling operations with the object of determining the quantity of salt available.

Building stone of fine quality is found in the front ranges of the Rocky Mountains. Other minerals occurring in larger or smaller supplies are gypsum, talc, potash, phosphate and manganese.

Placer gold in paying quantities but fine in texture occurs in the sands of almost all the large streams in Western Alberta. Platinum frequently occurs with the gold. Other metallic minerals have not yet been found to be commercially important.

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### REGULATIONS GOVERNING THE GRANTING OF MINERAL RIGHTS

**Coal.**—Coal mining rights may be leased from the Federal Government for a period of twenty-one years renewable at an annual rental of \$1 per acre. Not more than 2,560 acres shall be leased to one applicant. A royalty at the rate of five cents per ton shall be collected on the merchantable coal mined. A fee of \$5 shall accompany each application for a lease.

**Petroleum and Natural Gas.**—The petroleum and natural gas rights may be leased to applicants at a rental of twenty-five cents per acre, for the first year, and for each subsequent year a rental at the rate of fifty cents an acre payable yearly in advance. The term of lease shall be twenty-one years, renewable for a further term of twenty-one years. Application for a lease shall be made by the applicant in person to the agent or sub-agent of the Dominion Lands for the district in which the rights applied for are situated. A fee of \$5 and the rental for the first year shall accompany each application for a lease.

**Placer Mining.**—Any person over eighteen years of age may enter for mining purposes, locate, prospect and mine for minerals upon any Crown lands, or upon lands which form part of an Indian or other reservation.

**Limestone, Granite, Slate, Marble, Gypsum, Marl, Gravel, Sand, Clay or any Building Stone.**—Dominion lands containing limestone, granite, slate, marble, gypsum, marl, gravel, sand, clay or any building stone may be leased by the Minister at an annual rental of \$1 per acre, payable yearly in advance, for the purpose of quarrying out and removing therefrom stone or other of the materials mentioned. The term of the lease shall be twenty-one years. The maximum area of a quarrying location shall be 40 acres and no person shall be allowed to locate more than one location. Application for a location shall be filed by the locator in person with the agent of the Dominion Lands for the district in which the location is situated. A fee of \$5 shall accompany each application for a lease.

**Clay.**—Clay locations are leased upon the condition that a plant suitable for the manufacture of brick or other clay products shall be erected within two years from the date of the lease and, further, that in each year of the term of the lease after the second year there shall be produced ready for shipment not less than one hundred thousand bricks or their equivalent in some other form.



## TIMBER

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**Areas.**—A considerable part of Alberta, probably amounting to one quarter of the total area, in the southern, south-eastern and eastern sections of the province is without tree-growth of a size to make saw timber. This portion of the province has some light scrub, some willow and poplar bluffs on its more northerly edge and has cottonwoods in the river bottoms. A considerable additional area in the centre and east has scattered bluffs of poplar and strong willow that furnish pole timber for fencing or light buildings and fence posts. On some of the rivers of this part there is heavier timber of poplar and a little spruce and birch. This growth has considerable value and importance in a local way but does not occur in sufficient quantity to entitle the sections in which it occurs to be called timber areas. This leaves the mountain and foothill area of the south, the more or less broken head water country of all the Alberta streams, and the northern half of the province to furnish the greater part of the timber wealth of the country.

This is an important resource. Much valuable timber is not at present available, as it is too far from transportation services and the chief sources of supply at present are along rivers in the mountains and foothills where drives may be carried into the reach of railway lines. The whole area covered by merchantable timber is estimated at 5,416,000 acres, and the amount of lumber in board feet 21,000,000,000. The chief commercial timbers of the province are spruce, poplar, jack pine, birch, tamarac and willow. The areas from which most of the timber supplies are taken at present are the Crow's Nest country, on the Old Man River and its tributaries, the Porcupine Hills, and the upper parts of High River, Sheep Creek, Bow River, Red Deer, Athabasca, Saskatchewan, Brazeau, Pembina and Macleod. Important sources of timber wealth will open up in the better watered parts of Northern Alberta as settlement progresses.

The timber business is an important adjunct to mining in Alberta. The cutting of mine timbers is furnishing considerable wealth and makes use of a good deal of small material that is not useful for lumber.

**Reserves.**—The Forestry Branch of the Dominion Government has set apart large areas as timber reservations. The care of these involves protection against fire, the regulation of grazing and the planting and seeding of favourable areas. The chief divisions of the forest reserves are as follows: Crow's Nest, Bow River, Clearwater, Brazeau, Cooking Lake, Athabasca and Lesser Slave.

**Timber Berths.**—Timber Berths shall be disposed of by public auction at the office of the Dominion Timber Agent for the

district in which the berths are situated. Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles. No berth shall be disposed of until notice of the sale has been given for a period of not less than sixty days in a newspaper published in the district in which the berth is located and also in a newspaper having a general circulation in the province. Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars shall be paid part cash and balance covered by notes bearing interest at the rate of five per cent. per annum. The licensee shall be entitled to a renewal of his license from year to year subject to the regulations in force at the time renewal is made, while there is on the berth a sufficient quantity of merchantable timber as described in the license. The licensee shall pay an annual ground rent of five dollars per square mile, except for lands west of Yale, British Columbia, in which case the rent shall be five cents per acre. The licensee shall also pay one-half the cost of fire-protecting his berth. Any occupant of a homestead quarter-section having no suitable timber of his own may obtain a free permit to cut a stated quantity of building timber, fencing timber or fuel as he may require for use on the land he owns and occupies. If he requires a further quantity for the purpose mentioned he must pay the dues specified in clause (a) of section 42 of the regulations.

## FISHERIES

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**Lake Fishing.**—The fish supply of the province is important from the standpoint of local food resources, of commercial value and from the standpoint of game. There are two general kinds of fishing in the province, stream or river fishing and lake fishing. The chief fish wealth is found in the lakes of the upper part of Central Alberta and in Northern Alberta. The most important of these are whitefish, but pike, pickerel, tulibee and gold eyes are plentiful. Lake trout are found in only a few of the lakes in Central Alberta, particularly Cold Lake. The lakes furnishing the chief supplies for commercial purposes are Wabamun, St. Anne, Saddle Lake, Lac La Biche, Buffalo Lake, Lac La Crosse, Athabasca and Lesser Slave.



On the Canadian National at Jasper Park.

**Licenses.**—There are four classes of licenses issued: 1. Domestic licenses costing two dollars are issued to *bona fide* homesteaders or resident British subjects to catch fish for home consumption. 2. A *bona fide* homesteader or resident British subject may secure for five dollars a license to fish with not more than three hundred yards of gill net. 3. A resident British subject may secure for ten dollars a license to take fish with not more than six hundred yards of gill net. This license applies to the larger lakes and is good only for one season, either winter or summer, but not both.

4. A sturgeon license costing five dollars for commercial fishing permits the use of five hundred yards of gill net or five hundred baited hooks. A sturgeon license for domestic fishing and costing five dollars permits the use of not more than one hundred yards of gill net or fifty baited hooks. Only three sturgeon per week may be taken.

## FURS

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Alberta abounds in fur-bearing animals. It was the fur business which first attracted people of the Old World to Western Canada, including such companies as the Hudson's Bay Company, the North-west Fur Company and latterly Revillon Freres. The original practice was to establish trading posts for the collection of furs and the distribution of goods in exchange for furs. Most of the actual trapping is done by half-breeds and Indians. Edmonton was an important centre for the fur business in the old days and is still the most important fur emporium in Western Canada. The value of the fur output fluctuates greatly from year to year

and prices fluctuate greatly also, but the value of the output may be conservatively estimated between two and three million dollars.



Silvers from an Alberta Fur Ranch

The most numerous of the fur-bearing animals are the muskrat, fox, marten, otter, beaver, fisher and lynx. These animals are found chiefly in the northern part of the province, but the following animals of rather wider distribution furnish an important part of fur wealth: timber wolf, prairie wolf, wolverine, black, brown and grizzly bear, weasel, skunk, badger and lynx.

Non-resident trappers are required to pay a license of \$25.

# GAME

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**Big Game.**—Practically all the varieties of big game animals native to Western Canada, except buffalo and antelope, are found in the mountain parts of Alberta between the International Boundary and the headwaters of the Smoky River, approximately township 60. Different kinds, however, predominate in different sections. Mountain sheep and mountain goat are found in the neighbourhood of Pincher Creek, Banff and Jasper. Banff and Jasper being in the Dominion Parks, hunting around these points is prohibited, but hunting parties start from these places for hunting grounds beyond the park boundaries. Deer are plentiful along the foothills from the International Boundary to the headwaters of the Athabasca River. East of the foothill country they are found in the wooded country on both sides of the North Saskatchewan River well over towards the Calgary and Edmonton railway. Moose are found in the same section as deer but are more plentiful in the heavy wooded lands of the central and north-central parts of the province. The moose country spreads both north-east and north-west from Edmonton. Caribou are found in the mountain areas north of Jasper Park and generally north of the Athabasca River. Antelope are found in the district lying to the south of Brooks on the main line of the Canadian Pacific Railway about one hundred miles east of Calgary.

**Birds.**—Game birds are plentiful throughout the province. Wild ducks are found in all waters but are most plentiful on the prairie lakes and sloughs in the southern and central parts of the province. Geese are likewise widely distributed but are found principally in the north. They are plentiful on such lakes as Lesser Slave and Athabasca. Prairie chicken, or sharp-tailed grouse, are found in all parts of the province but are more plentiful in the brush country than on the prairie. Partridge, or ruffed grouse, are found in all the wooded parts of the province. Blue grouse and ptarmigan are found in the mountains and foothills. Hungarian partridge are plentiful in parts of Southern Alberta. They are naturalized and not native game birds.

The game regulations of 1919 prohibit the hunting of buffalo, elk or antelope at any time. Deer, moose and caribou, limited to one in a season, can be hunted between November 1st and December 14th; ducks and geese, September 1st to December 14th; prairie chickens and partridge, October 1st to November 14th; Hungarian partridge, October.

Big game licenses cost—resident, \$2.50; non-resident, \$25; bird game licenses, non-resident, \$5; resident, \$2.25. Licenses are required likewise for guides, camp helpers, game dealers and market hunters.

**Fish.**—The streams and lakes of the foothills of Southern Alberta and a few of the streams farther north are well stocked with trout and in some cases grayling, which furnish excellent sport and some supply of delicate food.



Scenes at Banff

## PARKS AND LAKE RESORTS

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**Parks.**—The Dominion Government has park reservations in Alberta to the extent of 4,357,660 acres. They are known as the Jasper, Rocky Mountain, Waterton Lakes, Buffalo, Elk Island and Antelope. They vary in size from 2,816,000 acres, which is the size of the Jasper reservation, to 5,020 in Antelope Park. The parks serve a variety of uses. Their chief value is their recreative and recuperative value and with this is associated the preservation of natural scenic attraction and of the flora and fauna. A number of the parks are big game preserves only, but all have a strong attraction for both citizens and tourists. Canada has a very large tourist traffic from the United States, Europe and to some extent the Orient.

Jasper Park is on the main line of the Canadian National Railways, a distance of about 240 miles west of Edmonton. It embraces a rich variety of river, lake, forest and mountain scenery. As yet it has not developed to any degree in tourist services but it offers wonderful attraction for visitors in its natural condition. Plans have been completed for a large hotel to be built by the Canadian National Railway next year. The park offers fine opportunities for sight-seeing amid romantic scenery. It is already very popular with campers who visit it for the fishing and for the enjoyment of short mountain trips. It is a game and forest preserve. Its mountain scenery is superb.

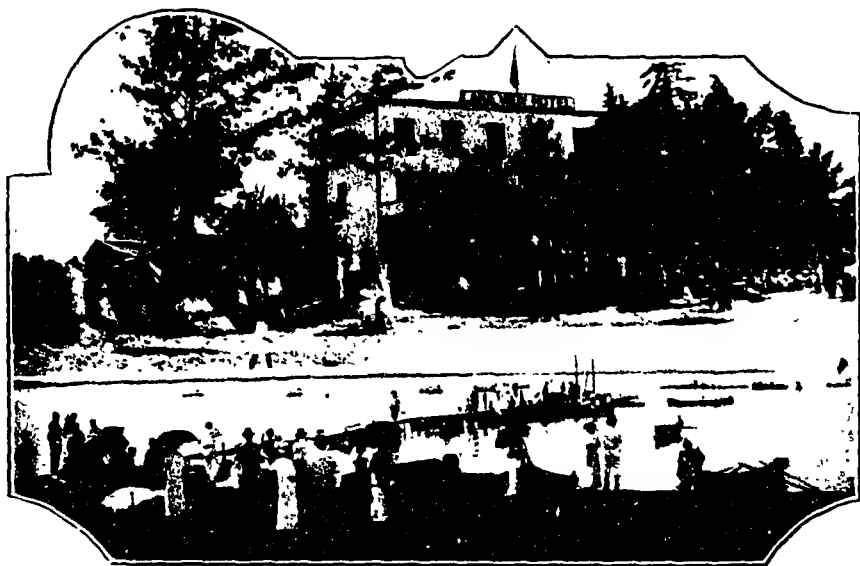
Rocky Mountain Park, of which Banff is the most interesting point, is situated about 80 miles west of Calgary. It has a greater diversity of grouped attractions than any other natural park on the continent. The scenery is unsurpassed. The accommodation for tourists is complete. The hotels are large and well appointed. There are hot springs of high restorative virtue for invalids. The sports of the district are excellent and a good deal of work has been done in the laying down of excellent roads by which the beauties of the park may be visited by motor. All the kinds of game in the province are found in the park either free or enclosed.

Buffalo Park at Wainwright is a game preserve and is not equipped for the accommodation of tourists. The park, which contains over a hundred thousand acres, was set apart chiefly for the buffalo herd which was purchased by the Dominion Government some years ago. The animals have increased rapidly and thrive well in the park and there are now nearly four thousand buffalo besides a number of elk.

Waterton Park contains 270,720 acres and is a park of very great beauty in the south-western portion of the province. It is

not situated on any of the large highways but is an important recreation ground for the people of Southern Alberta, particularly from such points as Lethbridge, Macleod, Pincher Creek, Cardston and other towns. It has excellent fishing and boating.

Elk Island, which is over 10,000 acres in extent, is situated near Lamont. It is a preserve for big game such as elk, moose, caribou, deer and a few buffalo. Antelope Park is situated in south-eastern Alberta. It holds a small band of antelope.



Scenes at the Lake Resorts

**Lake Resorts.**—In addition to the recreation furnished by the parks, the lakes of the province furnish fine opportunities for pleasure-seekers and for men, women and children in need of wholesome rest and repair. A number of these are favourably situated for railway transportation and have already developed the atmosphere of real holiday places for the people of the province.

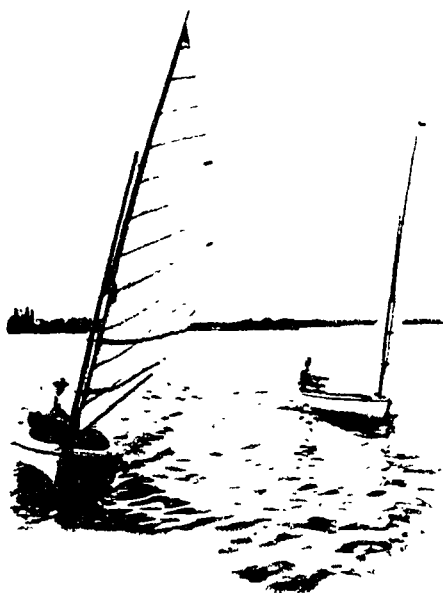
Gull Lake is one of the most popular of these. It is situated about seven miles from the flourishing town of Lacombe in the midst of beautiful, rolling, agricultural land. It is about twenty-five miles long and ten miles wide. It is reached from the line of the Calgary and Edmonton railway by the Blind Man Valley Railroad which runs west from Lacombe. It has a fine beach and attractive tree growth. It is frequented each year by visitors from Calgary, Edmonton and other towns. Buffalo Lake is a smaller body of water east of Lacombe and a few miles from Stettler. It is becoming very popular. Sylvan Lake is a popular resort near Red Deer. It furnishes fine bathing and boating and is set in beautiful surroundings. Lake Wabamun is a popular resort about forty miles west of Edmonton. It has a good beach and is protected by fine sheltering forests of poplar and spruce on the north



side and affords excellent bathing, fishing and boating. It may be reached by an excellent motor highway as well as by rail. It is well built up with summer cottages of attractive appearance. Alberta Beach is another lake resort of a similar kind to Wabamun. It is some distance west of Edmonton on Lac Ste. Anne. Cooking Lake is twenty-five miles east of Edmonton. It is a large body of water with a number of picturesque islands. It is a favourite week-end resort for the people of Edmonton and has a number of attractive cottages.

Lac La Biche is a very attractive lake in the north country on a branch of the Great Waterways Railway. It is one of the most beautiful sheets of water in the province. It has a good beach, numerous islands, and excellent fishing. It will develop in the future into a fine resort. Pigeon Lake is west of Wetaskiwin.

Many of the other lakes of the province only await the development of the country about them to answer the same recreative value as the ones already mentioned.



**Boat Scene at Lake Wabamun**

## TRANSPORTATION AND COMMUNICATION

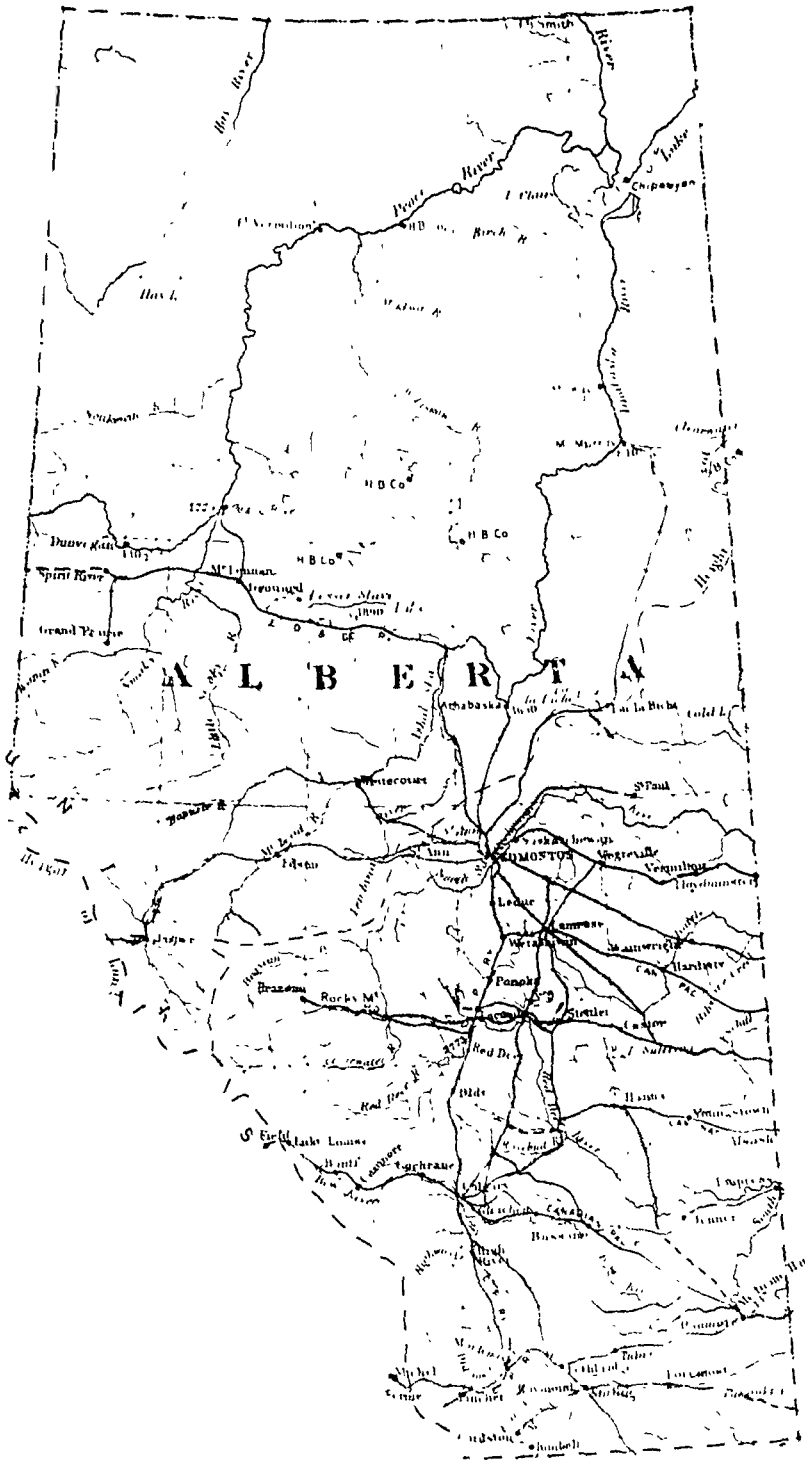
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**Railways.**--The Province of Alberta is well served with railways, roads and means of communication. The main line of the Canadian Pacific Railway crossed the province in 1885, going by way of Calgary and the Kicking Horse Pass. Since that time the Crow's Nest Pass section has been built. A north and south line connects Macleod and Edmonton through Calgary. A line from Moose Jaw joins this north and south line at Lacombe. Another line connects Winnipeg with Edmonton by way of Saskatoon. Canadian Pacific connection is likewise established with Great Falls, Montana, and a line connecting Lethbridge with Weyburn is about completed.

The Canadian National Railways, formerly the Canadian Northern and Grand Trunk Pacific, cross the province through Edmonton. A section of the Canadian National also connects Saskatoon with Calgary and a branch of the Alberta and Great Waterways reaches to Fort McMurray on the Lower Athabasca from Edmonton. The two lines of the Canadian National Railways have north and south lines connecting Calgary and Edmonton, and all of the three great transcontinental lines, besides the divisions and sections already referred to, have a great number of branch and stub lines into agricultural and mineral areas in different parts of the province. The Edmonton, Dunvegan and British Columbia Railway runs from Edmonton to Spirit River, serving the country on the south side of the Peace. This road is projected into British Columbia and will ultimately give coast connection to the Peace River country by linking up with British Columbia lines. At the town of McLennan a branch of the Central Canada Railway runs north to Peace River which it crosses by a modern railway and traffic bridge and opens out for settlement a vast agricultural area to the north and west.

The Government of the province has followed a vigorous policy in the increasing of railway services by guaranteeing the bonds of developmental lines within the province. This policy has made possible the opening of the Peace River country and has had a good deal to do with developing the mineral wealth in new fields, particularly in the centre and north of the province.

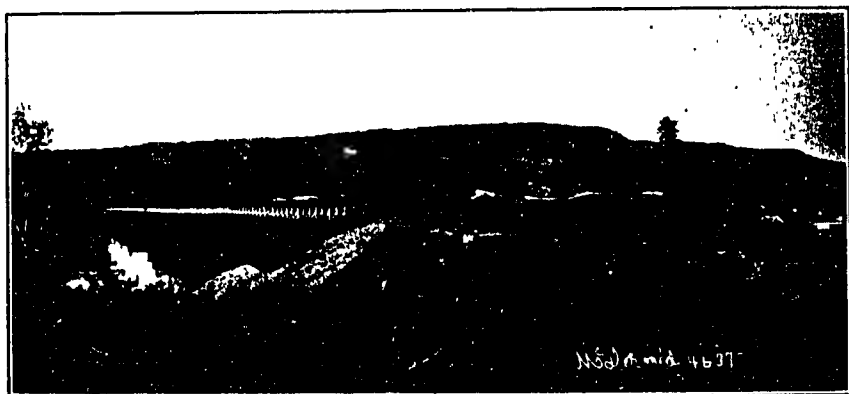
**Roads.**--The province has always been active in the furnishing of means for the settler to market his products and get his children to school. Alberta is not well supplied with road-making material. Where beds of gravel occur the material has to be hauled by railway for long distances and in some cases dredged from the river bottoms,



Development of Transportation

but dirt roads of as good a kind as can be made are built throughout all of the settlements. Some benefit is expected to be derived from the use of bitumen obtained from the tar sands of the Athabasca country in surfacing roads, but this will probably apply only to city roads which have a good concrete foundation.

The rural survey provides for roads a mile apart running north and south and two miles apart running east and west, that is, the land unit regularly enclosed by roads is a mile wide from east to west and two miles long from north to south. In addition to providing local road services the Department of Public Works is developing main traffic highways which are part of a Dominion highways service. District and local feeders are developed from these. Four of these



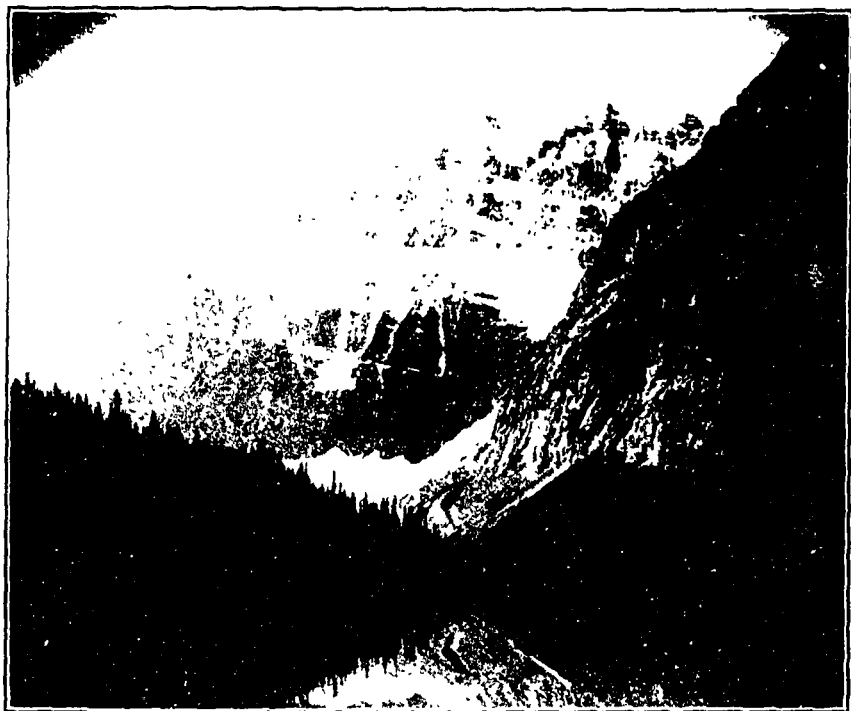
**Peace River Bridge—A Road to the New North**

main lines cross the province from east to west; one entering at Medicine Hat follows the general route of the main line of the Canadian Pacific Railway through Calgary and Banff to British Columbia; another follows the Crow's Nest Pass; the others reach the interior of the province at Lacombe, Wetaskiwin and Edmonton. A north and south line runs from Athabasca through Edmonton, Calgary and Lethbridge to Coutts on the international boundary. These roads will be specially developed in order to carry liberal traffic.

**Telephones.**—The government owns the general telephone system of the province. Long distance lines extend from Coutts to Athabasca and from points on the eastern side of the province to Banff and Entwistle, giving a service to an area estimated at 75,000 square miles, and serving a population of about 500,000 people. The policy of the Government is to make this channel of ready intercourse one of the early services established in behalf of new settlers even though the cost of the service per capita must necessarily be rather high where population is sparse. The telephone is doing away with the isolation and inconvenience in case of sickness and trouble in new settlements. There are in operation today 20,000 miles of long distance lines. There are 326 toll offices

and exchanges giving service to 719 cities, towns and hamlets. There are in the province 35,075 telephones and service stations, 11,019 of which are in farmers' homes. The total pay roll staff of the telephone system of the province is now about 800.

**Telegraph.**—The telegraph service of the province has developed with the railways, and is in most cases owned by the railways. The Canadian Pacific Railway Company has its own telegraph lines. The changing of the two other lines of railway into the Canadian National Railways will, no doubt, be followed by the passing of the telegraph lines also. The Dominion Government operates a line into the Peace River country.

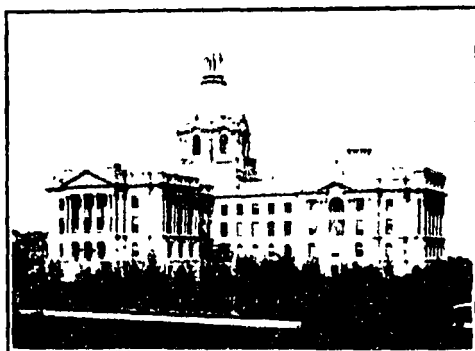


**Mount Edith Cavell at Jasper Park**

# GOVERNMENT

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The people of the Province of Alberta have for their government three sets of institutions which may be described as federal, provincial, and municipal. The federal and provincial institutions are modelled



**Provincial Legislative Buildings**

in form and spirit after the government of Great Britain itself. Nominally Great Britain is ruled by the King, but the carrying on of government is by representatives elected by the people. In the Dominion Parliament the sovereign is represented by the Governor-General and in the Provincial Legislature by the Lieutenant Governor. In the Dominion

Parliament there are two Houses: the House of Commons and the Senate, corresponding to the House of Commons and the House of Lords in the Imperial Parliament. In the Provincial Legislature there is only one legislative body, which is called the Legislative Assembly. In all three systems the actual work of administration is carried on by a committee from the chief legislative body itself, which is called the Cabinet, the government of the day or the Executive Council.

**Dominion and Provincial Governments.**—The constitution under which both federal and provincial governments are working is established by The British North America Act which was passed in 1867. While it is right to say that our systems are modelled after that of Great Britain, in the case of governments in Canada the functions of government are divided between the federal and provincial bodies. On account of the system under which the province is working, it is necessary to set out the division of authority between these two bodies. The division depends generally on whether subjects are of general character and incidence or are of local nature.

The following matters are assigned to the Dominion Government: public debt and property; trade and commerce; the raising of money by any mode or system of taxation; the borrowing of money on the public credit; postal service; census and statistics; militia; military and naval service and defence; salaries and allowances of civil and other officers of the government; beacons, buoys and

lighthouses; navigation and shipping; quarantine and marine hospitals; fisheries; ferries between provinces and other countries; currency and coinage; banking, savings banks; weights and measures; bills of exchange and promissory notes; interest; legal tender; bankruptcy and insolvency; patents of discovery and invention; copyrights; Indians and Indian lands; public lands; minerals, timber, fisheries and water power; naturalization; marriage and divorce; criminal law and procedure; penitentiaries.

The provincial government has control of: amendments to the provincial constitution except in relation to the office of Lieutenant Governor; direct taxation for provincial purposes; the borrowing of money on the credit of the province; the establishment of provincial offices and payment of officers; the establishment, management and support of provincial prisons, and reformatories; the establishment, management and support of hospitals, asylums and charitable institutions within the province; municipal institutions in the province; shop, saloon, tavern, auctioneer and other licenses; local works except such lines as steam or other ships, railways, canals; telegraphs and other works connecting with other provinces and countries; the incorporation of companies with provincial objects; the solemnizing of marriage in the province; education, property and civil rights in the province; the administration of justice in the province; provincial courts and procedure; the enforcing of law relating to any matter within the control of the province; other matters of a local nature.

The provinces and Dominion have concurrent jurisdiction in agriculture and to some extent in immigration. It has been recently established that the provincial courts have power to grant divorces. Formerly this office was deemed to belong exclusively to the Senate of the Dominion. Education, though a provincial subject, appears to be developing to some extent as a federal interest. This arises from the larger part that science plays in the industries and generally from the progressive realization of the increasing importance of principles and ideas underlying all kinds of productive and industrial processes. The development of the Dominion interest of trade and commerce, for example, cannot be promoted apart from the exercise of intelligent direction of the processes by which commodities or articles of commerce are produced. While the Federal Government does not control schools or establish schools in the provinces it gives aid to both agricultural and technical education and the fact that the Federal Government prescribes how money shall be applied results in some effective direction or at least encouragement of education.

At the time of the passing of The British North America Act only the provinces of Ontario, Quebec, Nova Scotia and New Brunswick were included in the union. Other provinces are admitted by special Acts. In the case of Alberta and Saskatchewan, which became provinces in 1905, the provinces were not given control of public lands, school lands, mines, minerals, fish, timber and water power. The same is true of Manitoba.

The representation of the various provinces in the federal house is determined on the basis of population. By The British

North America Act the number of representatives in the House of Commons is fixed at sixty-five for the Province of Quebec and for the other provinces the number is fixed on the basis of the relation of the population of each of these provinces to the population of the Province of Quebec, the number to be adjusted at the taking of each official census. The number of members in the House of Commons from Alberta is twelve and the number in the Senate five.

The Dominion Government has certain agents of its administration situated in the province; these include customs officers, agents for crown lands, timber and minerals. The government likewise has representatives from the fishery and forestry branches and from the agricultural department of the Dominion.

**The Provincial System.** The Lieutenant Governor of the province is appointed by the Governor General in Council, that is, the Dominion Cabinet. He holds office for five years and all Acts of the legislature to become law must receive his assent. He summons, prorogues and dissolves the Legislature and signs all orders in council, proclamations and appointments to office.

The Legislative Assembly of Alberta consists of fifty-eight members who secure office by election. The Assembly is elected for five years but may be dissolved before the completion of its term. Electors are male and female British subjects of one year's residence in the province and three months in the constituency.

The executive work of the Legislature is performed by the Executive Council, which is a committee consisting of the Premier and other members of the Assembly. The Premier is called by the Lieutenant Governor and the other members of the council are selected by the Premier. The Premier is the recognized leader of the strongest party in the Assembly and the other members of the council are those best qualified to co-operate with him. The Executive Council is commonly described as the Government or Provincial Cabinet. The Executive Council retains office so long as it has the confidence of the Assembly. Its work is subdivided into departments each of which is in charge of a member of the council called the minister for such department, though the Executive Council may include members who have not charge of departments, who are called ministers without portfolio. The chief minister or leader of a government is called the Prime Minister and President of the Council. The following departments are included in the organization of administrative work in the government of Alberta: The Department of the Attorney General; the Department of the Provincial Secretary; the Department of the Provincial Treasurer; the Department of Agriculture; the Department of Education; the Department of Municipal Affairs; the Department of Health; the Department of Railways and Telephones, and the Department of Public Works.

The finances of the province are derived from subsidies from the Dominion Government, compensation for provincial lands,



revenue from school lands and from direct taxation and fees, taxes on corporations, increment, wild lands, educational and other taxes.

**Judicature.**—The courts of the province are of two kinds, the Supreme Court of Alberta and the District Court of Alberta. The Supreme Court is the highest court in Alberta and its jurisdiction is not limited; the District Court is concerned with less important cases. There are nine judges of the Supreme Court, one of whom is called the Chief Justice. The judges are appointed and paid by the Dominion Government but the courts are supported by the province. The province is divided into judicial districts in each of which there is at least one district judge, a sheriff, a crown prosecutor and a clerk of the court. In addition to Supreme and District Courts there are courts presided over by magistrates and justices of the peace. The province is also divided into registration districts at the offices of which all chattel mortgages and lien notes are registered. All land is held under the Torrens system. The title to land is secured by registration in a Land Titles Office.

**System of Survey.**—The land survey system of the province is simple and easily understood. The survey unit is the township which is six miles square. The building up of the survey is deter-

PLAN SHOWING  
SUBDIVISION OF TOWNSHIP

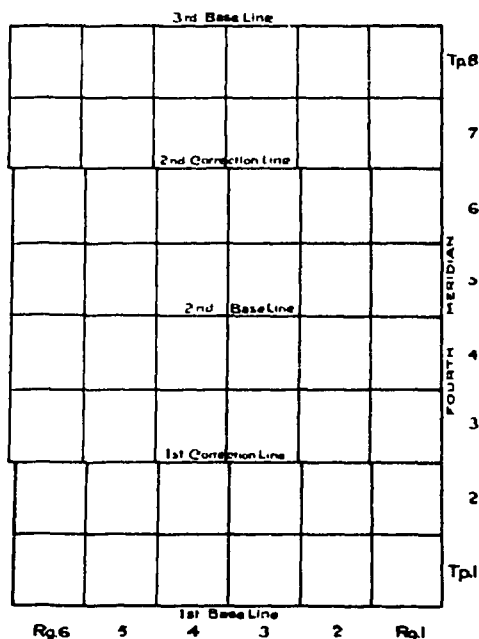
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| 31 | 32 | 33 | 34 | 35 | 36 |
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| 7  | 8  | 9  | 10 | 11 | 12 |
| 6  | 5  | 4  | 3  | 2  | 1  |

mined from the International Boundary for an east and west line and from the fourth meridian, which forms the eastern boundary of the province. From the fourth meridian the rows of townships running north and south are called ranges and are numbered from the meridian west, and the townships are numbered from the International Boundary north. The larger subdivisions of townships are sections, or square miles of land containing 640 acres. Each township thus

contains 36 sections or 23,040 acres. The sections are numbered from the south-east corner westward in each township, the second tier being numbered from west to east and so on alternately throughout the six tiers. The sections are subdivided into quarters or 160-acre farms. These are described as the south-east, south-west, north-west and north-east quarters. Roads are sixty-six feet wide and there are six roads running north and south in each township, but only three running east and west.

An apparent variation in the regular survey occurs to meet the converging of conventional meridian lines towards the north. To overcome the contraction in width due to north and south lines

PLAN  
SHOWING SYSTEM OF  
SUBDIVISION IN TOWNSHIPS AND RANGES



not being parallel, base lines are run west from the principal meridians every twenty-four miles. The first one is only twelve miles north of the boundary. Township lines are run north and south for twelve miles at points six miles apart on the base lines. North-going lines necessarily converge and south-going lines diverge with the result that jogs occur in north and south roads along the lines midway between the base lines. The lines on which these adjustments appear are called correction lines. As they alternate with the base lines they are also twenty-four miles apart.

On account of the barriers offered by many of the rivers, or for the sake of convenience in the case of practically all the rivers of the province, the conventional square survey is varied by the arranging of river lots running in their longest dimension from the river fronts. These vary in size according to topography.

**Municipal Government**—There are four kinds of communities or bodies for which municipal government services are required. There are cities, towns, villages, municipal districts and improvement districts. There are six cities in the province. The governing body of a city consists of a mayor and aldermen, but the method of carrying on the administration of cities varies. Each city works under a charter of its own. The governing body of a town consists of a mayor and six councillors, and of a village a reeve and three councillors. Towns and villages are governed by The Towns Act and Village Act respectively.

Municipal districts are organized by the Department of Municipal Affairs on petition of resident electors of the proposed municipal district. The governing body of a municipal district consists of six elected councillors. The person selected as chairman is called the reeve. Municipal districts are commonly eighteen miles square.

Unorganized units of the same size, and which will ultimately become municipal districts, are called improvement districts. The affairs of such districts are administered by the several departments of the government.

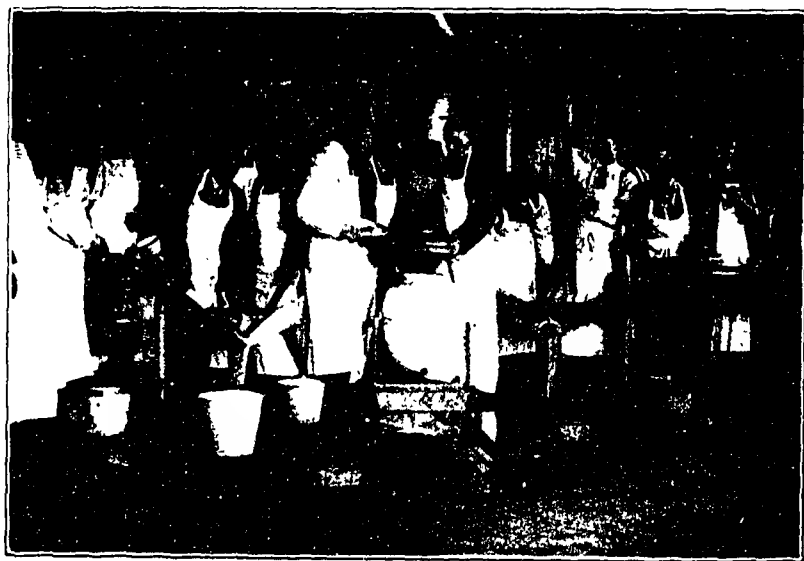
**Population.**—The population of Alberta has always been dominantly English-speaking. Of the total population of 496,525 under the 1916 census the English-speaking classes included Canadian-born, born in the British Isles, born in the British possessions, and made a total of 329,494. In addition to these there were 91,674 people from the United States, all of whom are English-speaking and most of whom are of British origin, many of them being repatriated Canadians. Including these with the other English-speaking inhabitants the total percentage of English-speaking inhabitants would read 84.84. The figures are given below:

|                              |               |
|------------------------------|---------------|
| English-speaking, including: |               |
| British-born                 | 86,699        |
| Canadian-born                | 241,357       |
| Born in British possessions  | 1,438         |
| United States                | 91,674        |
|                              | — — — 421,168 |
| Russians                     | 14,733        |
| Austrians                    | 11,372        |
| Galicians                    | 9,389         |
| Norwegians                   | 6,369         |
| Swedes                       | 6,360         |
| Germans                      | 5,325         |
| Bukovinians                  | 4,460         |
| Italians                     | 1,999         |
| French                       | 1,982         |
| Danes                        | 1,902         |
| Dutch (Holland)              | 1,721         |
| Belgians                     | 1,482         |
| Finns                        | 1,194         |
| Hungarians                   | 776           |
| Bohemians                    | 542           |
| Roumanians                   | 541           |
| Icelanders                   | 285           |
| Greeks                       | 173           |
| Bulgarians                   | 69            |
| Others                       | 906           |
| Asiatics                     | 3,042         |
| Other countries, and unknown | 1,800         |

At the last regular census the rural population was 307,776, nearly 62 per cent., and the urban population 188,749. The present population is estimated at 625,000.

## EDUCATION

Alberta shares with the other western provinces the fraternal and philanthropic spirit which finds expression in liberal public services in such matters as schools, churches and hospitals. Educational institutions have been an important care of the province at all times. The common features of the general system of education represented in elementary, secondary and college institutions constitute the basis of educational work. Besides this there are normal schools, technical schools, a technical institute and agricultural schools, directed and liberally supported by the province, besides the usual private, commercial and boarding schools for boys and girls found in the cities.



**Dairy Instruction at the Agricultural Schools**

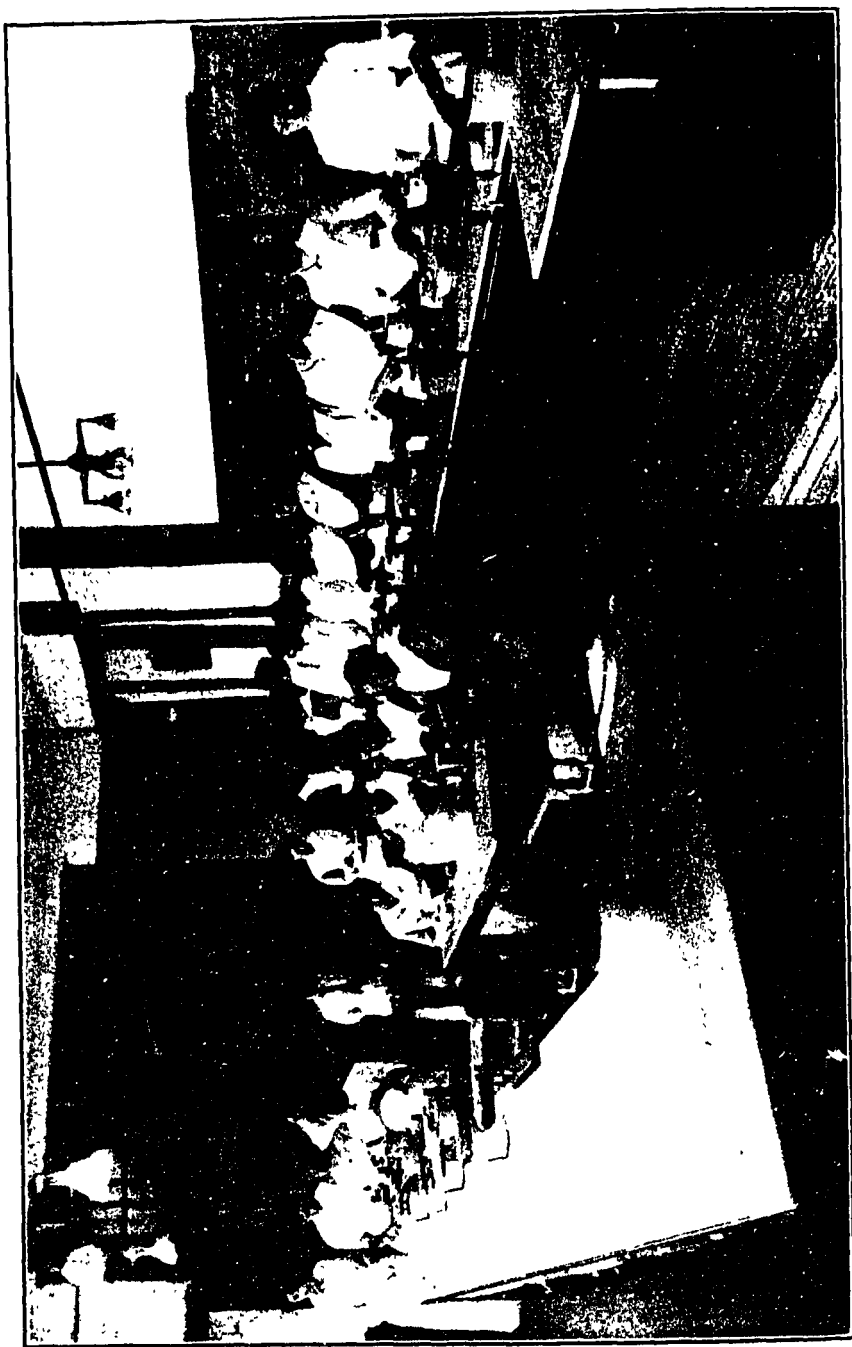
The elementary schools are maintained in a satisfactory state of efficiency. Country schools are liberally supported and new schools receive special support. Schools may be established in settlements with four resident ratepayers and eight children between the ages of five and sixteen. Attendance up to the age of fifteen is strictly enforced. The minimum salary for country teachers is fixed by the Government at \$840 per year. Provision is made for the erection of teachers' residences by public funds which gives

permanency in the tenure of teachers. Consolidation is making rapid progress in the province. There are over fifty consolidations at present organized, and some of these already offer the best type of training for boys and girls represented in a couple of years of general high school work besides useful courses in agriculture, manual training and domestic science for those who are returning to the farms. These schools likewise furnish centres for activities of men's and women's organizations for social, patriotic, religious and literary gatherings. The interests of minorities are respected in the provision of separate schools, but they are subject to state inspection and to the carrying on of the same curriculum by teachers of the same qualifications and training as those employed in the public schools. Private schools are also inspected.

The cities and towns and many of the villages have high school services which are available without fees to country as well as town pupils. In the cities a good class of technical training is provided for by the city boards under the same direction by the central Department of Education as the general courses of the schools. The department encourages the practical and vocational sides of education by paying special grants for this class of work in both town and country. The high schools provide training for matriculation, for teaching, and in case of the larger cities, for commercial and mechanical occupations. There are three normal schools in the province, at Edmonton, Calgary and Camrose, which provide an eight months' course in the professional training of teachers. This professional training is further supplemented by institutes, conventions and summer schools. The Department of Education is charged with the care of mentally defective children and a large institution with a farm of one thousand acres is being established for this purpose near Edmonton. Prominence is given to agricultural teaching in the elementary school. All high school students preparing for teaching are obliged to take agriculture in the high schools.

In the year 1918 of the total 5,652 teachers employed in the schools males numbered 1,090 or nearly twenty per cent. The average salary of male teachers was \$1,066.50 and of females \$876.44. The growth of the schools is shown in the progress of organization of new schools and the progress of school enrolment over a period of ten years:

|      | No. of School<br>Districts | No. of<br>Pupils |
|------|----------------------------|------------------|
| 1909 | 1,250                      | 46,048           |
| 1910 | 1,501                      | 55,307           |
| 1911 | 1,784                      | 61,660           |
| 1912 | 2,029                      | 71,044           |
| 1913 | 2,235                      | 79,909           |
| 1914 | 2,360                      | 89,910           |
| 1915 | 2,478                      | 97,286           |
| 1916 | 2,598                      | 99,201           |
| 1917 | 2,779                      | 107,727          |
| 1918 | 2,971                      | 111,109          |



Cooking at Agricultural Schools

The University of Alberta is situated in Edmonton South. It opened with 37 students in 1908 but at the close of 1919 had a registration of over a thousand. The work of the university is organized into the following faculties: arts and sciences; applied science; medicine, law and agriculture. In addition to these regularly organized faculties the university conducts a school of pharmacy, school of accountancy and gives the first two years instruction in dentistry. A number of denominational colleges are affiliated with the university. The land at the university includes 600 acres, 400 of which is devoted to the work of the faculty of agriculture. The university is doing important work in the re-education of returned men.

The Department of Agriculture directs the teaching of agriculture in special schools for farm boys and girls. These schools are six in number and provide courses in crops and cultivation, live stock husbandry, dairying, farm mechanics, horticulture and poultry, besides science work related to agriculture, also English, mathematics, civics, farm management, rural economics, and rural organization for women. These schools are situated at Vermilion, Olds, Claresholm, Raymond, Gleichen and Youngstown and with each of the schools is an institutional farm which furnishes opportunity for the study of rotations, farm equipment and management, care of live stock and the judging of live stock. In addition to the farms associated with the schools there are a number of other provincial demonstration farms.

In addition to the courses and regular terms at the Schools of Agriculture short courses for farmers are frequently put on. Summer excursions are also arranged to the farms. Recently the schools have been serving an important use in the retraining of ex-service men. One of the schools is at present given over to this work. It has been arranged that summer courses, which will embrace instruction in the practice of Alberta agriculture, will be given for a period of five months to boys and young men from Great Britain who are preparing to go on the land. These courses will consist of half time in instruction and half time in farm occupations on the institutional farms connected with the schools.

The Dominion Government has experimental farms at Lacombe and Lethbridge and a number of sub-stations in the northern part of the province at such points as Beaver Lodge, Fort Vermilion, Grouard and Fort Smith.



Galt Gardens at Lethbridge



## CITIES AND TOWNS

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EDMONTON is the capital of the province and has a population of about 60,000 people. It was a Hudson's Bay fort in 1795. It occupies a site of great natural beauty on the banks of the North



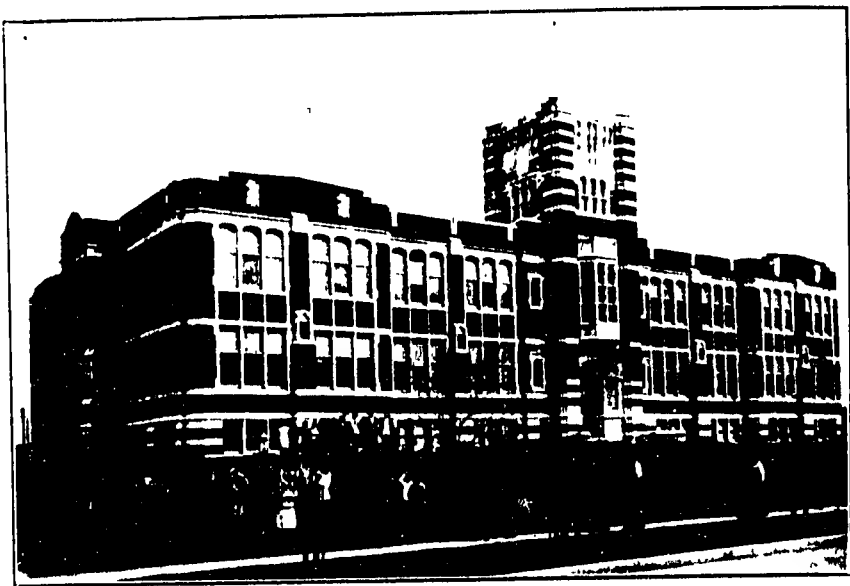
**The Macdonald, Edmonton**

Saskatchewan River and is built chiefly on the level bench land about two hundred feet above the river level. A high level traffic, railway and street railway bridge and three other bridges connect the north and south sides of the city. Three transcontinental railways pass through it from Winnipeg connecting it with the coast cities of Vancouver and Prince Rupert. The Edmonton,

Dunvegan and British Columbia and the Great Waterways lines bring the products of the Peace River country and the fish, timber and furs of the north out by way of Edmonton.

It has an active commercial life supported from a large and richly productive agricultural and live stock area and by the demands of retail and wholesale supply to the same area for points on ten railways or branches radiating from the city. It has manufactures of flour, breakfast foods, biscuits and confectionery, clothing, bricks, cement, lumber, hides and iron. It has three large packing plants. It is well equipped for schools, churches, hospitals and hotels. The provincial university is situated in Edmonton South. It also has a normal school. It has an excellent local system of schools including elementary school, high school and technical school services. It owns and operates its own city utilities. It has large supplies of excellent coal for both domestic and steaming use. With its vast tributary wealth in grain and live stock, its mines, timber, fish and furs, its great railway development and progressive civic spirit Edmonton will doubtless become one of the great cities of the Dominion.

CALGARY is the largest city of the province. Its population is estimated at 70,000. It is situated at the junction of the Bow and Elbow Rivers at the entrance to the foothills. It was founded in 1875 by the North-West Mounted Police as a stockade fort.



**Type of Edmonton Public School**

It was reached by the Canadian Pacific Railway in 1885, since which time it has been important in the commercial, industrial and agricultural life of the province. It is served by the three great railway companies. It has large car shops and roundhouses, private and government elevators, and manufactures of lumber, flour, soap, cement, cured meats and leather. It owns its own civic utilities. Its wholesale interests are important. It distributes into the Province of British Columbia by both main line and Crow's Nest services and into Southern and Central Alberta. It has a large live stock trade. It is the headquarters of the Canadian Pacific Irrigation interests. The farm organizations of the province have their head offices at Calgary. The public and large commercial buildings are of Calgary sandstone and are handsome and substantial. Among its important institutions are the Provincial Institute of Technology, the Provincial Normal School, a number of private schools and colleges and an excellent city school system. It is well equipped with churches, libraries, hospitals, and hotels. The city has developed an active social quality which finds expression in various clubs and societies for recreative and improving purposes and which makes it attractive to residents, visitors and tourists. The great national playground at Banff is within easy distance of Calgary.

LETHBRIDGE is a divisional point and the most important city on the Crow's Nest division of the Canadian Pacific Railway. It also has direct lines to Calgary and to Shelby on the Great Northern Railway in Montana. Lines run south-west to Cardston and south-east towards Weyburn. The city was originally established on account of its coal, then known as the Galt coal, and was called Coalbanks. It has a number of mines which produce a superior grade of bituminous coal.

It was formerly the centre of large ranch interests, but all the land of the district has been subdivided into farms. It was the headquarters of the first large irrigation enterprise established in the province and which is now owned and operated by the Canadian Pacific Railway Company. The use of irrigation has made the country tributary to Lethbridge on the east and south attractively productive. An additional hundred thousand acres north of Lethbridge will be brought under irrigation in the near future. The city itself has been greatly beautified by the use of irrigation water. It is substantially built. It has a good class of business blocks,

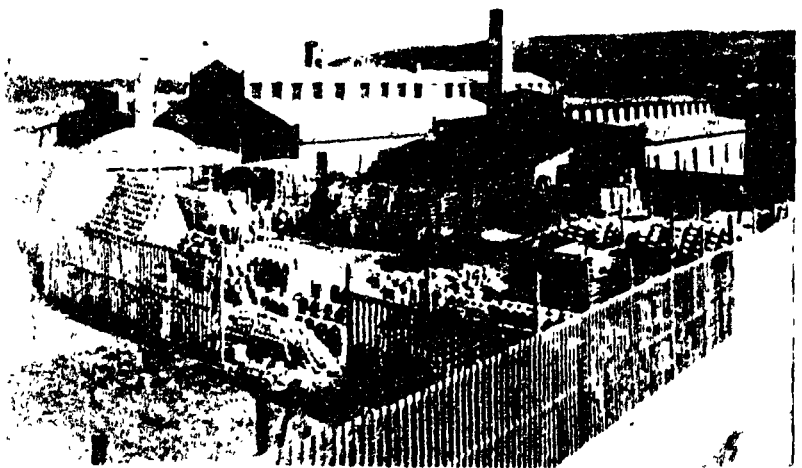
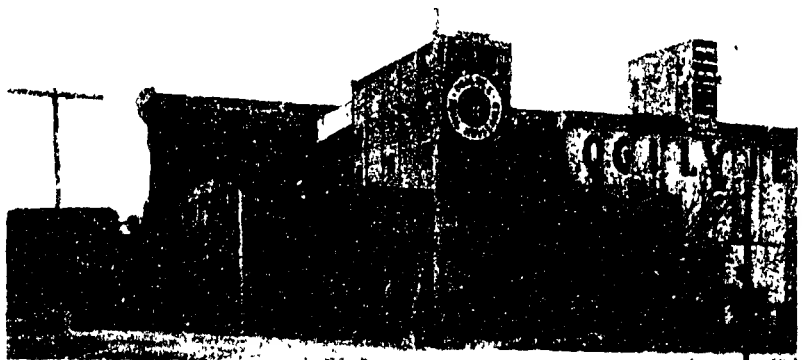
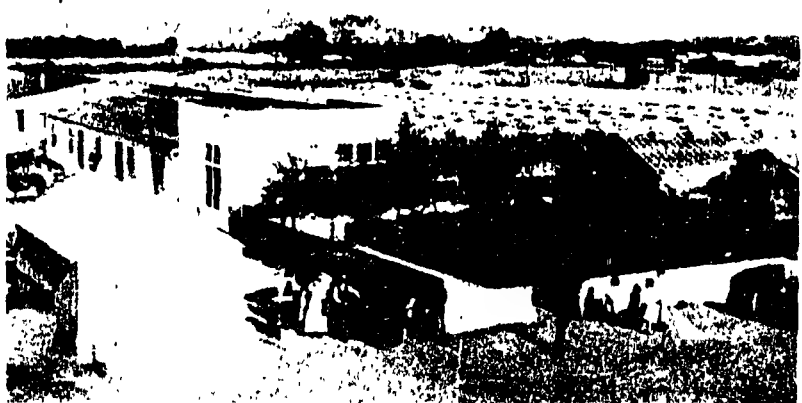


**Arts Building at Provincial University**

schools, churches and residences. It has a good wholesale business on the Crow's Nest Railway. One of the Dominion Experimental Farms, which illustrates both irrigated and dry farming practice, is situated at Lethbridge. Its irrigation, mines, wheat and sheep and other stock constitute a large total of wealth and resource for the Southern Alberta centre.

MEDICINE HAT is one of the most important industrial cities of the province. It is situated on the main line of the Canadian Pacific Railway twenty-five miles from the eastern boundary in the centre of the greatest natural gas field yet discovered in the province. Gas is found at a depth of a thousand feet. The gas furnishes household fuel to the whole city at the small cost of 20c. per thousand cubic feet and 5c. per thousand for industrial purposes. In addition to gas the city has good supplies of lignite coal close at hand.

It has a number of important manufactures. It has a flour-milling capacity of five thousand barrels daily. It has large manufactures of plain and glazed tile. It has rolling mills, a pump and



Industrial Plants in the Gas City

brass factory, implement factory, linseed oil mills and a large pottery factory. It is an important railway point. About seventy-five train and engine crews work from the city. A few miles south-east of Medicine Hat the Crow's Nest division strikes west from Dunmore Junction. This point is also well supplied with gas. The Canadian National Railways will build a line from Medicine Hat to Hanna. It is an important agricultural and ranching centre and it has a large supply trade over a wide area in all directions. It has a superior class of homes and excellent schools which are well administered.

Immediately west of Medicine Hat and almost joining it is the town of Redcliff with a population of about eighteen hundred people. It has large glass works which employ about 150 people. It has a steel mill and extensive brick works which set a standard of quality and good appearance in building material for the province. The industrialism of Redcliff is supported on the gas supply likewise.

The other cities of the province are RED DEER and WETASKIWIN, which are important points on the Calgary-Edmonton division of the Canadian Pacific Railway. Wetaskiwin is a junction point on the Edmonton-Saskatoon service of the Canadian Pacific. The Alberta Central Railway runs west from Red Deer to Rocky Mountain House. Red Deer is a divisional point on the Calgary and Edmonton Railway. Both cities are important grain and live stock centres and have built up a number of local industries to suit their resources and needs.

**Towns.** Alberta is specially well served with market towns. These have arisen in the first place as elevator centres to take care of the vast grain output of the country and furnish supplies to settlers. Many of them have either co-operative or private creameries or cheese factories. Most of them have now important commercial interests, good schools and homes and a light class of milling and other manufacturing concerns suited to their needs. There are twenty of these towns in the province that have between a thousand and two thousand people.

PEACE RIVER, situated on the Peace, is the oldest town of the north country. It is situated in the valley of the river and is surrounded by picturesque hills. It is already developing good business services. The bridge crossing the river at this point opens out the country north and west for the settler. There is a rich country consisting of Bear Lake, Friedenstal and Waterhole districts tributary to Peace River. Detachments of Alberta Provincial Police and of the Royal Canadian Mounted Police are located at Peace River. GRANDE PRAIRIE is at present the largest town in the Peace River country. Development is proceeding very rapidly around this centre, particularly to the west, and important centres have been established as far as the British Columbia boundary. The town is now on a stub line of the Edmonton and Dunvegan Railway from Spirit River, another thriving town, but will probably be connected up with the Canadian National system from Edson.

ATHABASCA is the terminus of a branch of the Canadian National Railways running from Edmonton. It was the point at which river trade north started before the railway was built to Fort McMurray.

VEGREVILLE is a well established elevator and live stock town on the Canadian National Railway. A considerable part of the Russian settlers of the province are situated north of Vegreville and in an area running quite a distance east and west. VERMILION is on the Canadian National Railway. It has important live stock interests especially to the north. It has a provincial agricultural school. TOFIELD is an important agricultural and coal mining centre east of Edmonton. WAINWRIGHT is a combined ranch and



**The Buffalo Ranch at Wainwright**

farm district on the line of the Canadian National Railway towards the eastern side of the province. LLOYDMINSTER is situated on the boundary of the province east of Edmonton, part of it being in Saskatchewan. The district produces a superior quality of grain and also has important ranching interests in horses, cattle and sheep. FORT SASKATCHEWAN is the site of a provincial jail. It is picturesquely situated on the Saskatchewan River and is one of the old mounted police centres. CAMROSE is an important railway centre, has a normal school, is a sub-judicial district and is surrounded by excellent land. PONOKA is a good dairy and stock centre south of Edmonton and is the site of the Provincial Hospital for the Insane.

LACOMBE is a substantial agricultural town on the Calgary and Edmonton railway. The land in the district has been much sought for years. It is heavy producing early land that is easily worked. It has important purebred live stock interests. It has a creamery. The Dominion Experimental Farm is situated beside the town. The town itself is substantially built, it has active business interests and good schools. The Blindman Valley Railway runs west from Lacombe. Gull Lake is situated seven miles west.

INNISFAIL is in the centre of an attractive mixed farming and dairy country. STETTLER is a busy centre on the Lacombe-Moose Jaw line. It has a large distributing trade with the country and on the other hand receives large quantities of grain and live stock from the farming and ranching land surrounding it. The soil surrounding Stettler is highly productive. It yields large quantities of grass and grain. The country is well watered and provided with natural shelter.

DRUMHELLER is one of the most active coal-mining centres of the province. It produces an excellent class of domestic coal which is exported to the Province of Saskatchewan and as far east as Winnipeg. The district surrounding Drumheller produces a good deal of excellent live stock and is developing as a desirable mixed farming country. YOUNGSTOWN is situated on the section of the Canadian National Railways between Calgary and Saskatoon. In common with Oyen, Cereal and Chinook it has important elevator interests and considerable live stock raising. It has an agricultural school and demonstration farm. HANNA is a railway junction point on the Canadian National Railways between Calgary and Saskatoon. It is a live stock centre. OLDS and GLEICHEN are likewise agricultural school centres and both have large live stock interests and produce heavy crops of grain and hay. BASSANO is an important town in the irrigated country east of Calgary.



**Visitors viewing Grain Plots on the Demonstration Farm**

HIGH RIVER is an important town forty miles south of Calgary. It is a grain and live stock centre. There are important ranch interests to the west. The Lane ranch is situated twenty miles from this point. CLARESHOLM is an active market town in the grain country between Calgary and Macleod. It has an agricultural school and is surrounded by beautiful land. MACLEOD was one of

the first ranch towns of Southern Alberta and the traditions of the old ranch country still cling to it. It is at the junction of the Calgary and Edmonton line with the Crow's Nest division of the Canadian Pacific Railway. It is changing rapidly to a mixed farming country. It is a judicial district centre.

COLEMAN, BLAIRMORE, LUNDBRECK and TABER are mining towns on the Crow's Nest Railway. PINCHER CREEK is an old farm and ranch country at the entrance to the foothills on the Crow's Nest railway. The country about this centre is very attractive. It produces large crops of timothy and large quantities of timothy seed. It also produces good horse and cattle stock.

RAYMOND is a ranch and farming centre south of Lethbridge. It was established in the first place as a sugar beet centre. It has good schools, a small college and is the site of an agricultural school which is to be devoted to the teaching of irrigation and other branches of farming. CARDSTON is an attractive mixed farming district in the foothills of Southern Alberta, not very far from the International Boundary. It is the headquarters of the Mormon church in Alberta.

Other active market towns are: Beverly, Bow Island, Brooks, Carmangay, Castor, Coronation, Daysland, Diamond City, Didsbury, Edson, Granum, Grouard, Hardisty, Irvine, Leduc, Magrath, Morinville, Nanton, Okotoks, Stavely, St. Albert, Stony Plain and Strathmore.



**A Prominent Member of the Poultry Club**



## MISCELLANEOUS

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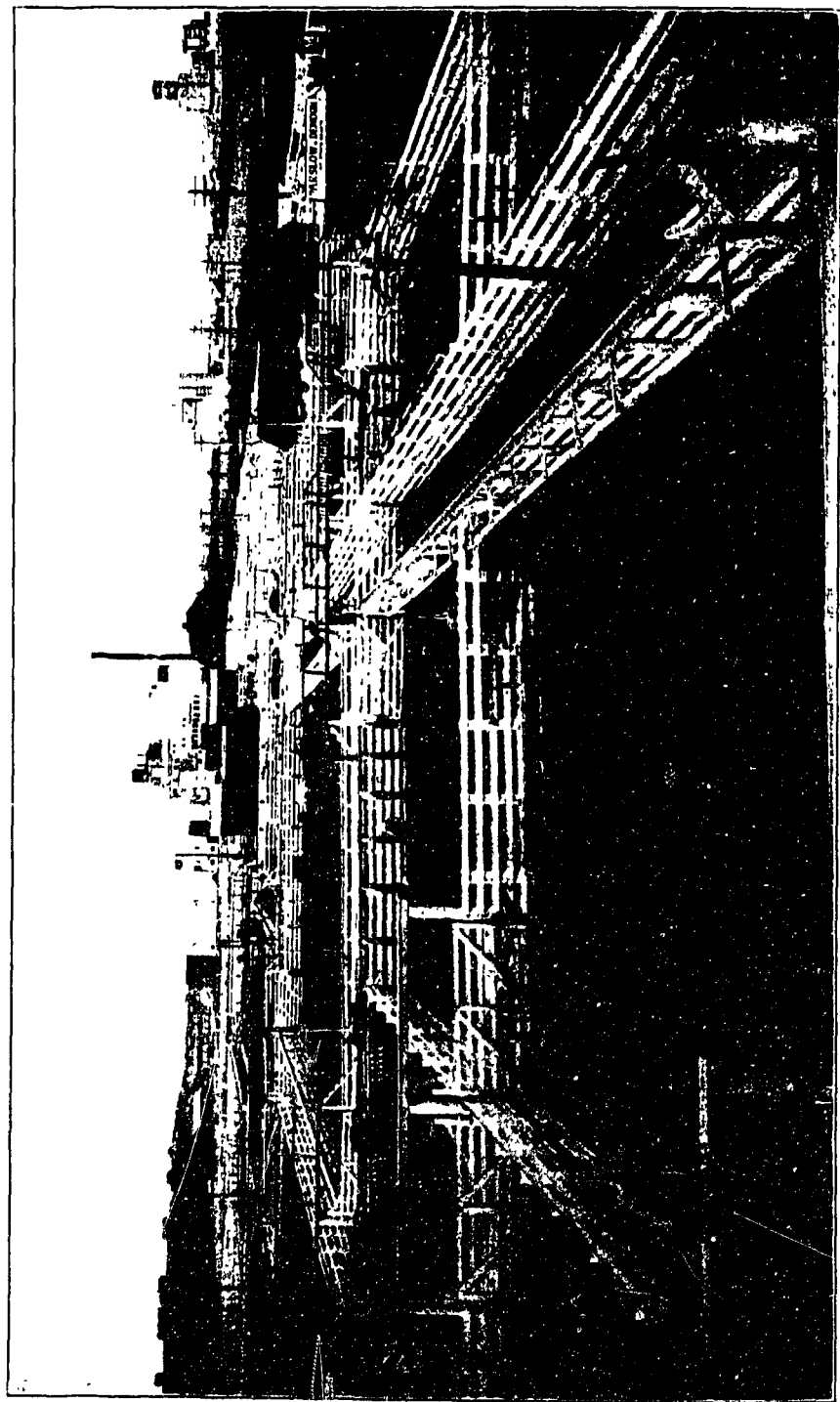
**Farm Land Prices.** It is possible to secure Alberta farm lands at prices that are reasonable either for actual farming, for investment, or for profit in both ways. The heavy yielding virgin land of Alberta will give good profits in crops and live stock and at present is due for a steady increase in value.

Alberta land did not increase in price up to its earning capacity during the war. The country was short of labour before the war and help was still shorter during the war on account of heavy enlistment. There were no accessions of people or capital during the war. In the United States land advanced in price rapidly during the war in measure with the returns it gave under war prices because the profitable plough land is practically all occupied. In Alberta only fifty per cent. of the plough land has been alienated. The amount of land still unoccupied prevents a sensitive sharpening of prices to any great extent on the occupied lands. Land business in the United States is vitalized by the fact of the whole of the land having gone into use, and it has been increasing in value year by year. An idea of the advance in prices may be had from the following table of average prices:

|      |         |
|------|---------|
| 1916 | \$58 39 |
| 1917 | 62 17   |
| 1918 | 68 38   |
| 1919 | 71 31   |

The average price of Alberta plough land is probably about a third of the price of United States lands.

In addition to a reasonable average price the prices for the best lands are still lower relatively. Iowa land for example is worth \$169 per acre and Illinois \$144 on the average, with some of it as high as \$400 or \$450 per acre. The same difference obtains between Alberta lands and Old Country lands. Good land can be owned in Alberta for the yearly price that good land can be leased in the United States and Great Britain. Unbroken land can be had at from \$20 to \$40 and occupied land at from \$25 to \$75 according to the degree of improvement. Raw irrigable lands are obtainable at from \$50 to \$75 and improved irrigable lands at from \$75 to \$125. It is generally possible to purchase land from private owners on terms of four or five years. Corporation lands can be secured on still easier terms—in some cases extending over a period of twenty years with loans furnished by the companies for the same period at low interest.



Calgary Stockyards

## MARKETING

**Grain.** Alberta enjoys the best possible facilities for marketing grain. The grain trade is regulated by The Grain Act which provides against abuses in marketing. Grain is sold to



Canadian Government Elevator at Calgary

grades established by law and which are set up by government inspectors. There are over five hundred elevators in the province, 146 of which are owned by the farmers, and the grain is handled through these and other elevators. All grain dealers work under license and are bonded, which insures the farmer against loss by either dishonesty or insolvency on the part of the dealer.

The farmer may deliver his wheat at the elevator for cash, or if he prefers to hold it for a time with the prospect of obtaining a better price he may store it in the elevator and secure a storage ticket denominating the quantity and the grade. Then he can sell when the market suits him. If he desires to ship his grain directly the law provides for a loading platform at every station in order that farmers may have facilities for loading direct from their wagons into the cars.

**Live Stock.** Conditions for marketing live stock are satisfactory. The conducting of stockyards is regulated by The Live Stock and Live Stock Products Act. The markets available to producers are the large central stockyards at Edmonton and Calgary, the yards of the packing plants in these places, and the market made by travelling drovers and dealers. In the past drovers have to a considerable extent controlled prices in outside districts, but this is not possible now. The producers are organized into live stock shipping associations that conduct their own business through a managing secretary. Stock is collected and shipped on set dates to commission firms at the central stockyards, where selling is made under competitive conditions. Shipping associations are frequently organizations of the Grain Growers or United Farmers' Associations.

The business of the central stockyards is subject to close regulation by the Dominion Government with respect to equipment, officers, scales, water, etc., with respect to the handling of stock, and also with respect to correctness of returns for stock sold by members of a commission firm or live stock exchange.

The Dominion Government is fostering the saving of female cattle stock by providing, in conjunction with the railway companies,

for free transportation of females under two years bought at the stockyards by *bona fide* farmers. Railway transportation, and other expenses also, are paid to purchasers of such stock. The same arrangement applies to ewe stock under four years old. Shipments must consist of forty ewes or twenty cattle. Under this regulation some thousands of cattle have gone to the Peace River country from the Edmonton markets.



**Beef Sires**

**Produce.** Butter-marketing receives direct government care. The Provincial Dairy Commissioner is equipped to make advances on consignments of butter to the cold storage warehouse of the Department of Agriculture at Calgary, and holds or releases the product to suit the conditions of the market. All butter is graded and the grades, which are fixed by The Dairymen's Act, are established with the trade at both outside and local centres. The Commissioner will give grading at both Calgary and Edmonton to all samples of butter submitted.

The Department of Agriculture also conducts an egg and poultry marketing service. This service may be taken advantage of by individual farmers, or other producers, or by groups of farmers or associations. Eggs are graded and sold, and returns made to shippers—advances being made at the time eggs are received.

**Organization of Rural Credit.**—The Government of the Province of Alberta has organized the financial resources of the country and has a number of Acts for this purpose.

The Alberta Co-operative Credit Act provides for the organization of societies of thirty farmers into associations for the furnishing and guaranteeing of loans to members. The Treasury Department of the Government undertakes the guarantee equally with the municipality in which the loan association is formed. Each member of the association subscribes \$100. Officers are elected and arrangements made with the banks to loan money to borrowers on notes endorsed by the society. The purposes for which the loan may be made are the purchase of live stock, of seed grain, feed, implements, or the payment of the cost of the season's operations. The loan runs for a period of one year. The rate of interest is subject to arrangement but is usually about 6%. The society holds a lien on live stock or other property purchased with the money borrowed. A number of these societies have already been organized and eight of them are in operation.

The Live Stock Encouragement Act, popularly called "The Cow Bill," is an Act passed to enable homesteaders and other settlers to secure cows, and the loans secured under this Act are limited to this purchase. Five or more farmers may form an association to secure loans. The loans may not exceed \$500 to each member. The Act is administered by the Live Stock Commissioner who determines the amount of loan to each member and through his inspectors protects the interests of the government in the live stock. The loan runs for a period of five years at 6% interest, the interest being payable yearly. Each member of the association pays \$1 to defray clerical expense. The Provincial Treasurer guarantees the loan. The live stock is marked with a government brand and can only be disposed of with the consent of the Live Stock Commissioner. A part of the loan may be used for the co-operative owning of a purebred bull. The sum of a million and a half dollars has already been guaranteed by the government for loans to settlers under The Live Stock Encouragement Act. Several hundred associations have been organized under this Act.

**Services in Behalf of Health.** A sense of the fundamental importance of the health of the public has found expression in a vigorous and constructive policy on the part of the government in relation to health. The importance of the interest has been recognized by having in the government a Minister of Health. A deputy minister of health directs the activities of the branches into which the work is organized, such as hospitals, child welfare, school inspection and sanitation. There is also a provincial officer of health.

The government gives aid to forty-eight hospitals already established in towns and cities and recently provision has been made

to furnish hospital services to the whole rural people in the same general way as public school services are provided. Under The Municipal Hospitals Act the lands of rural communities are made the basis of support of local municipal hospitals through general taxation. Hospital accommodation is free to all residents of the municipality or municipalities voluntarily establishing hospital districts and establishing hospital services. A considerable number of these districts have already been organized and hospitals have been built in seven of them.

Specially trained school nurses have been set to work in rural districts to make general diagnosis of the condition of pupils who are poor in health or who are suffering from curable defects. Parents are advised by personal visit of nurses of the kind of care the child requires. This service is chiefly for country children. It is already established practice for school boards in towns and cities to provide such inspection under powers conferred by The School Act. Where this has not been done government nurses carry out inspection.

A Board of Health deals chiefly with questions of sanitation, sewer and water services and the control of epidemics in cities, towns and villages directly through its staff of inspectors or indirectly through local health boards.

An institution for the care of tubercular patients to a capacity of one hundred and seventy-five, to be increased to two hundred and fifty, is being provided jointly by the provincial and federal governments. Special district nurses tour the province in educational and follow-up work. There are two hospitals for the insane in the province.

**Rural Organizations.**—The Department of Agriculture made possible the erection of elevators in the province by associations of farmers some years ago by guaranteeing most of the cost of erecting these elevators, and the organization of farmers has made rapid progress since that time. There are in Alberta a number of organizations of both farmers and farm women for different types of effort. The United Farmers of Alberta is the name of an organization of men who have formed themselves into associations principally for the purpose of buying and selling to advantage. Associations of United Farmers ship and sell their live stock in car lots, and they purchase in car lots also supplies of heavy commodities needed on the farm, such as posts, wire, lumber, flour, fruit, groceries, implements and binder twine. The United Farm Women are organized generally for the carrying on of benevolent and patriotic work. Both these associations are voluntary associations.

The Women's Institute branch is one of the administrative offices of the Department of Agriculture. It carries on active work among both farm and town women. The purposes of the institutes are the development of good home-making by the teaching of sewing, cooking, nursing and sanitation by courses of instruction and demonstration; the improvement of educational conditions and of the care of children; the carrying on of patriotic and charitable work and the promoting of social intercourse. In addition to the Women's Institutes the branch also organizes Girls' Clubs. These clubs receive direction and assistance in useful activities.

**Agricultural Societies.** Another important kind of organization is the agricultural society. There are ninety-three of these in the province holding annual fairs. In addition to holding fairs it is the work of the associations to hold seed fairs, ploughing matches, field grain competitions, improving meetings and other meetings for the carrying out of co-operative action. There are four exhibition associations which have charge of the fair work in the cities. These associations work in close relation to the interests of the country. They encourage the exhibition of good live stock, agricultural, horticultural, and industrial products. An important development of fair work at present is the school fair which is carried on by the Department of Agriculture with the co-operation of the Department of Education.

District agents are employed by the Department of Agriculture to give assistance to the people of the farms in the solving of their problems. They take an active part in organizing the school fairs. Live stock features are becoming an important interest in the school fair work.

**Labour.** There is a steady demand for reliable labour. The farms, homes, mines, and lumber camps are generally short of help. On the farms good wages can be had, especially for the summer half of the year. Seventy-five dollars per month and board is common. Winter employment on the farms is not so greatly needed as summer work. The lumber and tie camps furnish good winter work. Mining is developing rapidly. In 1918 Alberta led the provinces of the Dominion in coal production and markets are extending. Many homesteaders work in the mines in winter.

Domestic help is scarce in Alberta and monthly wages from \$25 to \$50 can be had for help ranging from plain servants to house-keepers.

**Homestead Regulations.** All surveyed agricultural Dominion lands, except school land and Hudson's Bay Company's land which are not disposed of and not reserved or occupied, are open to homestead entry. At present lands within fifteen miles of a railway are reserved for Soldier Settlement. School lands and Hudson's Bay Company's lands are regularly allotted in each township. School lands are sections 11 and 29 in each township, and Hudson's Bay Company's lands are sections 8 and the south half and the north-west quarter of section 26 in each township south of the North Saskatchewan River, but in every fifth township the Hudson's Bay Company has the whole of section 26. The entry for homestead does not include the mineral or water rights.

Subject to certain exceptions, every person who is the sole head of a family and every male who has attained the age of eighteen years and is a British subject, or declares his intention to become a British subject, is entitled to obtain entry for a homestead consisting of one quarter section of land, on payment of an entry fee of ten dollars. A widow having minor children of her own to support may make entry as the sole head of a family. A widow cannot make entry after re-marriage.

An order in council of December 14th, 1916, provides that no application for an entry for a homestead shall be granted unless

the person making application was at the commencement of the late war, and has since continued to be, a British subject or a subject of a country which was an ally of His Majesty in the late war, or a subject of a neutral country, and unless he establishes the same to the satisfaction of the Minister of the Interior.

Entries are made for lands to the land agencies or sub-agencies in the district in which the lands are situated. The securing of a homestead in any part of the Dominion exhausts the right of the settler for homesteading. Application for entry must be made in person, except in the case of one member of a family applying for another.

A homesteader is required to perform certain duties in order to entitle him to finally receive his patent on land. He is required to live six months in each year on his land in a habitable house for three years. Residence duties cannot be performed by proxy. Homestead duties must be completed within three years from the date of entry. A homesteader may perform his duties if he lives not more than nine miles away on a farm of not less than eighty acres, owned solely by him, without being obliged to live on the homestead, or he may perform his homestead duties while living with relatives on owned land of not less than eighty acres in the vicinity of the homestead. A homesteader is required to bring under cultivation in the first three years not less than thirty acres of land, twenty of which must be cropped. When not residing on the land fifty acres must be broken, thirty of which must be cropped.

Where land is not suited to cultivation homestead duties may be satisfied by the running of stock on such land to the number of five head the first year, ten head the second year and sixteen head the third year. Ten sheep or ten hogs are the equivalent of one head of large stock. Buildings for the accommodation of stock must be erected and the whole of the land fenced. No patent shall be granted for a homestead until inspection has been made and a report filed with the Department of the Interior showing that the regulations have been complied with. The privilege of pre-emption of land and also of homestead purchase has been withdrawn.

**Leases.**—Grazing leases on vacant Dominion lands unfit for agricultural purposes in Alberta may be secured by British subjects and running for a period of ten years. Tenure shall be free from interruption during the period of the lease. Grazing leases may be granted on vacant lands irrespective of the quality of the soil located over forty miles from the railway, but subject to withdrawal on a year's notice. The size of a lease is limited to 12,000 acres. Rent is four cents per acre payable half-yearly in advance. Grazing leases may be secured on school lands also in Alberta at four cents per acre. In all leases the lessee is obliged to make statutory declaration of owning the amount of stock required by the regulations. Leases on school lands run only for one year.

**Customs Regulations.**—A settler may bring into Canada, free of duty, live stock for the farm on the following basis, if he has actually owned such live stock abroad for at least six months before his removal to Canada, and has brought them into Canada within one year after his arrival, viz.: If horses only are brought



in, 16 allowed; if cattle are brought in, 16 allowed; if sheep are brought in, 160 allowed; if swine are brought in, 160 allowed. If horses, cattle, sheep and swine are brought in together, or part of each, the same proportions as above are to be observed.

Duty is to be paid on live stock in excess of the number for which provision is made as above. For customs entry purposes a mare with a colt under six months old is to be reckoned as one animal; a cow with a calf under six months old is also to be reckoned as one animal. Cattle and other live stock imported into Canada are subject to quarantine regulations.

The following articles have free entry:

Settlers' effects, free, viz.: Wearing apparel, household furniture, books, implements and tools of trade, occupation or employment; guns, musical instruments, domestic sewing machines, typewriters, live stock, bicycles, vehicles, tractors valued at \$1,400 or less until further notice admitted free of duty, and agricultural implements in use by the settler for at least six months before his removal to Canada, not to include machinery or articles imported for use in any manufacturing establishment or for sale; also books, pictures, family plate, furniture, personal effects and heirlooms left by bequest provided that any dutiable articles entered as settlers' effects may not be so entered unless brought with the settler on his first arrival, and shall not be sold or otherwise disposed of without payment of duty until after twelve months' actual use in Canada.

The settler will be required to take oath that all of the articles have been owned by himself or herself for at least six months before removal to Canada; that none have been imported as merchandise, for use in a manufacturing establishment or as a contractor's outfit, or for sale; that he or she intends becoming a permanent settler within the Dominion of Canada and that the live stock enumerated is intended for his or her own use on the farm which he or she is about to occupy (or cultivate), and not for sale or speculative purposes, nor for the use of any other person or persons.

**Freight Regulations.**—Carload shipments of farm settlers' effects must consist of the following described property of an actual farm settler, when shipped by and consigned to the same person.

Household goods and personal effects, all second-hand, and may include:

Agricultural implements and farm vehicles, all second-hand (will not include automobiles).

Live stock, not exceeding a total of ten head, consisting of horses, mules, cows, heifers, calves, oxen, sheep, or hogs (from Eastern Canada not more than six head of horses and mules may be included in a car of farm settlers' effects).

Lumber and shingles (pine, hemlock, spruce, or basswood), which must not exceed 2,500 feet in all, or the equivalent thereof, or in lieu of (not in addition to) the lumber and shingles, a portable house, knocked down, may be shipped.

Seed grain, trees or shrubbery. The quantity of seed grain must not exceed the following weight: Wheat, 4,500 pounds; oats, 3,400 pounds; barley, 4,800 pounds; flax seed, 400 pounds. From points in Western States 1,400 pounds of seed corn may be included.

Live poultry—Small lots only.

Feed, sufficient for feeding the live stock while on the journey.

Live Stock.—Should a settler wish to ship more than ten head of live stock, as per Rule 1, in a car, the additional animals will be charged for at the less-than-carload live stock rate, at estimated weights as per Canadian Freight Classification, but the total charge for the car will not exceed the rate for a straight carload of live stock.

When live stock forms part of the shipment, the usual live stock form of contract must be signed. Shipper must show on the live stock contract the numbers of head of each kind of stock loaded in car. Agents will require attendants to affix their signatures in blank space provided for same on face of Live Stock Contract.

Passes.—One man will be passed free in charge of full carloads of settlers' effects containing live stock, to feed, water, and care for them in transit, subject to conditions specified in the Canadian Freight Classification. No reduced return transportation will be given.

Top Loads.—Agents do not permit, under any circumstances, any article to be loaded on the top of box or stock cars; such manner of loading is dangerous and absolutely forbidden.

Settlers' effects, to be entitled to the car load rates, cannot be stopped at any point short of destination for the purpose of unloading part. The entire carload must go through to the station to which originally consigned.

The carload rates on farm settlers' effects are based on minimum weight per car, of: From points north of St. Paul or Duluth, 24,000 pounds; north of Chicago, Kansas City or Omaha to Duluth or St. Paul, 20,000 pounds; south and east of Chicago, 12,000 pounds. Additional weight will be charged at proportionate rate.

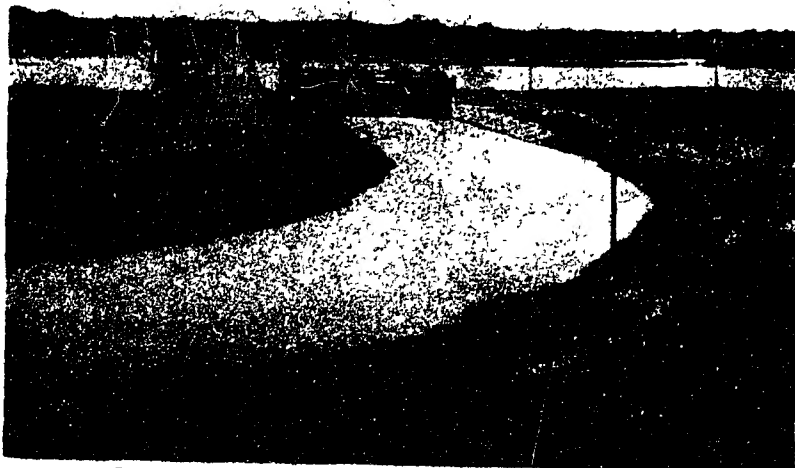
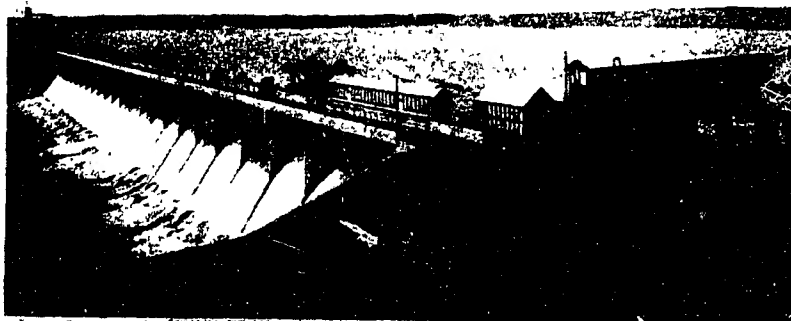
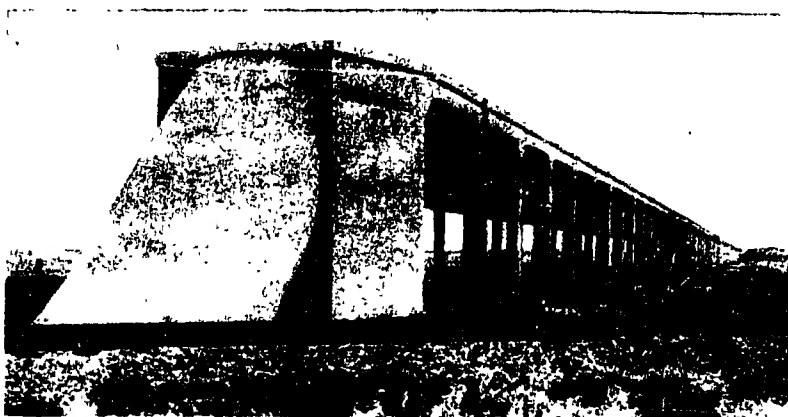
From points south and east of Chicago only five horses or head of live stock are allowed in any one carload. Any number over five will be charged extra.

## CANADIAN AGENTS IN THE UNITED STATES AND GREAT BRITAIN

Prospective settlers in need of detailed information with respect to railway fares, freight rates, customs, regulations or other matters relative to immigration into Canada should apply to Canadian immigration officers situated in the United States, of whom there is one in each of the chief States. They are as follows:

M. V. MacInnes, 176 Jefferson Ave., Detroit, Mich.; C. J. Broughton, Room 412, 112 W. Adams St., Chicago, Ill.; George A. Hall, 123 Second St., Milwaukee, Wis.; R. A. Garrett, 311 Jackson St., St. Paul, Minn.; M. J. Johnson, 202 W. 5th St., Des Moines, Iowa; O. G. Rutledge, 301 E. Genesee St., Syracuse, N.Y.; W. S. Nethery, 82 Interurban Station, Columbus, Ohio; J. M. MacLachlan, 215 Traction-Terminal Building, Indianapolis, Ind.; W. E. Black, Clifford Block, Grand Forks, N.D.; Geo. A. Cook, Drawer 197, Watertown, S.D.; W. V. Bennett, 200 Bee Bldg., Omaha, Neb.; F. H. Hewitt, 2012 Main St., Kansas City, Mo.; K. Hadiland, Room 6, Dunn Block, Great Falls, Mont.; J. L. Porte, Cor. 1st and Post Sts., Spokane, Wash.; J. E. LaForce, 1139 Elm St., Manchester, N.H.; L. N. Asselin, Biddeford, Me.; Max A. Bowlby, 73 Tremont St., Boston, Mass.; F. A. Harrison, 200 North 2nd St., Harrisburg, Pa.; Gilbert Roche, 3 and 5 First St., San Francisco, Cal.; J. C. Koehn, Mountain Lake, Minn.

The Canadian Government Immigration Officer in London, England, is Lt.-Col. J. Obed Smith, 11 Charing Cross, London, S.W., 1.



**Structures on the Canadian Pacific Irrigation Canal**